

Canada Lumberman

Time is Money

The rapid cutting File is the economical File

Files Branded

American - Arcade - Eagle - Great Western
Globe - Kearney & Foot - McClellan - J. B. Smith

are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



A Test Like
THIS

8" chain broken at 11,770 lbs. Tested
at McGill University in 1909

25% More Weld = 25% More Strength = 25% More Wear

Tested Steel Chain

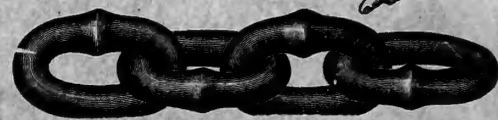
made at

St. Catharines, Ont.

by

McKinnon Chain Co.

Secured only with
welds like THIS



UNHARMED BY WATER, STEAM OR CHANGE OF TEMPERATURE

Dick's Belts are guaranteed to run through water, or steam, if necessary, without injury and to be unaffected by changes in temperature. They have been applied with signal success to every variety of work for which belts are used. Saw Mill owners find Dick's Balata Belting the cheapest when length and quality of service are considered. Catalog No. 17 on Transmission Appliances tells all about it.

DICK'S Balata Belting Leather Belting Wood Split Pulleys Shafting Hangers Iron Pulleys
Steel Pulleys Saw Mill Supplies Clutches Babbitt Wood-Working Machinery Steam Goods

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Fairbanks Scales
Montreal Toronto

Fairbanks-Morse Gas Engines
St. John, N.B. Winnipeg

Safes and Vaults
Calgary Vancouver



THE BELT YOU WILL EVENTUALLY USE

BECAUSE—It withstands heat, cold, damp, wet and chemical fumes.
BECAUSE—It is uniform in thickness and runs true.
BECAUSE—Of its great strength, almost twice that of oak-tanned double leather.
BECAUSE—It costs no more, all things considered.

F. REDDAWAY & COMPANY

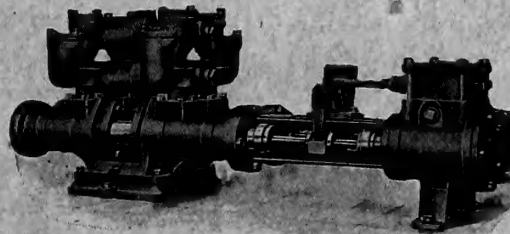
SOLE MAKERS

MONTREAL

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER

First: BETTER PUMPS Second: BETTER SERVICE

You pay us for the FIRST and you consequently get the SECOND



The
**Smart Turner
Machine Co.**

Limited

Hamilton - Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

..

..

MONTREAL

Midland Planing Mill Products

THE LEADING STOCK LINES IN ONTARIO

1914

*Wishing a Happy and Prosperous New Year
to the Trade*

MR. DEALER,

Start the New Year right,

Turn over a New Leaf.

Get the **Price** the amount your purchases warrants.

If you handle 1000 doors a year, buy them on a

Midland Door Contract,

and get the Price your Business deserves.

If you handle **ten thousand**, get the price on ten thousand. Don't pay extra prices on a lot of small orders. Not when you can get the Best Line of Doors in Canada, with the Best Prices from us, on a MIDLAND DOOR CONTRACT.

We Strive to Please our Customers

While we cater to Stock Lines, we manufacture all kinds of millwork at Reasonable Prices, and can take care of all your wants. It pays to buy from us.

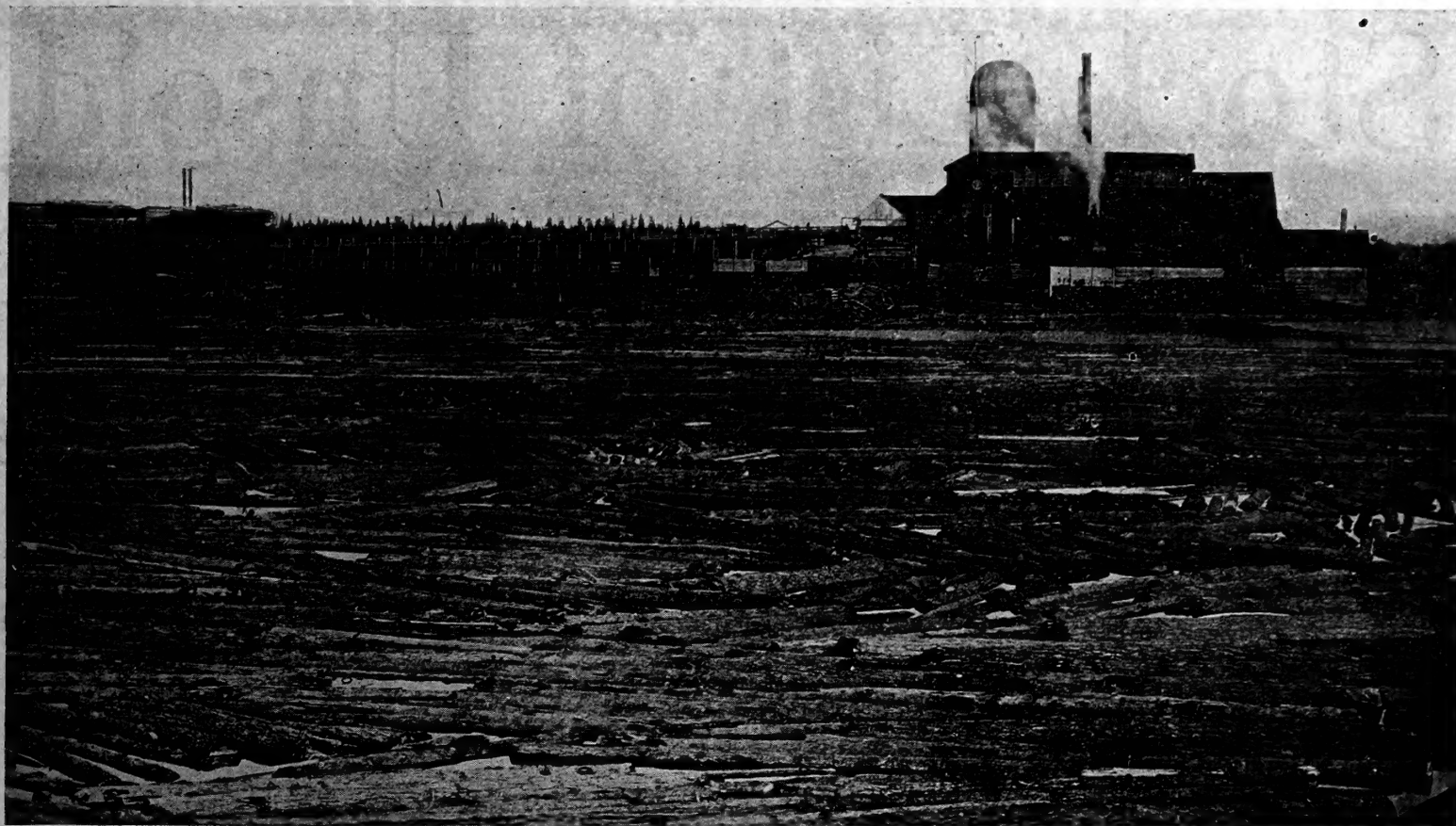
Write to-day for our Door Catalogue, and a sample MIDLAND DOOR CONTRACT, stating how many doors you handle per year, and the style door you prefer. *It won't cost you anything to see what the Contract looks like.*

WRITE TO-DAY.

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product

Midland - Ontario



VIEW OF OUR MILL AND BOOMS

Your Orders For Red and White Pine

We are in position to take care of orders for almost anything in Red and White Pine.

In addition to a large assortment of 1, 2, 3 & 4", we have on hand the following dimension timber in Red and White Pine.

6 x 6 — 10/20'	60,000'	8 x 12 — 12/20'	6,000'
6 x 8 — 12/18'	18,000'	10 x 10 — 20/24'	5,000'
6 x 10 — 12/22'	18,000'	10 x 10 — 12/18'	125,000'
6 x 12 — 16 & 18'	22,000'	10 x 12 — 12/18'	35,000'
8 x 8 — 12/24'	30,000'	12 x 12 — 12/24'	70,000'
8 x 10 — 12/18'	65,000'	12 x 12 — & 14 x 14	5,000'

Prompt shipment can be made of any of the above. We also have a dry Kiln and Planing Mill in connection, and are in position to do milling on short notice.

George Gordon & Company
 Limited
 CACHE BAY ONTARIO

Stock List of Unsold Lumber Now Ready

Write for copy

The Colonial Lumber Co., Limited.

Pembroke, Ont.

P I N E
THAT'S
I N E

P I N E
THAT'S
I N E

IF YOU APPRECIATE

our care in manufacturing reliable and dependable Pine Lumber — our quick methods of shipping — and our “always right” prices, you’ll be glad you sent that order for

WHITE PINE

to us. We can fill any size bill you want.

JOHN LUMSDEN

Manufacturer of Pine Lumber
LUMSDEN'S MILLS, QUE.

P I N E
THAT'S
I N E

P I N E
THAT'S
I N E

Mason, Gordon & Co. 80 St. Francois Xavier Street, **Montreal, Que.**

Everything in Timber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

Write, Wire or 'Phone for Prices

Western Office:—Pacific Building, VANCOUVER, B. C.

Winter Sawn, Ready to Ship

400,000 ft. 1 x 4/up—6/16 No. 2 Com. and Better Maple

150,000 ft. 2 x 6/up—6/16 No. 1 “ “ “

100,000 ft. 1 in. Mill Cull Ash

This stock is winter sawn and in good shipping condition.

We would be pleased to receive your enquiries

Our new mill will be in operation by the first of the year when we will be pleased to take care of your winter's sawing. We will be glad to hear from you now regarding winter sawing.

Fassett Lumber Company, Limited
Fassett, Que.

**13 FT. STOCK
GOOD GRADE AND
MANUFACTURE**

SPRUCE

1x9, 1¼x9 and 2x9.
**SEE STOCK LIST
BELOW**

For Quick Shipment from Stock in Yard. Rail or Water Deliveries.

Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Clear & No. 1
1x4	1x9	1¼x7	2x4	2x9	3x7	1x4
1x5	1x10	1¼x8	2x5	2x10	3x8	1x6
1x6	1¼x4	1¼x9	2x6	3x4	3x9	1x7
1x7	1¼x5	1¼x10	2x7	3x5	3x10	1x8
1x8	1¼x6	2x3	2x8	3x6	3x11	1x9
					3x12	1x10

DRY SPRUCE, 10 to 13 feet LENGTHS (mostly 13 feet).

We also solicit Special Sawing Bills of 13 foot Spruce for future delivery.

QUEBEC & ST. MAURICE INDUSTRIAL COMPANY, Portland, Maine

JOHN GILLIES
President

DAVID GILLIES
V. -President

J. S. GILLIES
Sec.-Tres.

Established
1873

GILLIES BROS.

Mills and Head Office
BRAESIDE, ONT.

Limited
Manufacturers of

WHITE PINE

RED PINE

SPRUCE

Planing Mill, Yard and Office
MORRISTOWN, N. Y.

New York City
Guy E. Robinson, 1123 Broadway

The
**Georgian Bay
Lumber Co.**

Limited

Waubashene, Ontario

Manufacturers of High Grade

**Lumber
and Laths**

**Fraser Bryson
Lumber Co., Ltd.**

Wholesale Lumber Dealers

Selling agents for Fraser & Co., Manufacturers
Mills at Deschenes, Que., near Ottawa

**White Pine
Red Pine
Spruce
Lumber and Lath**

Office, **Castle Building**
53 Queen St. **Ottawa, Can.**

Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

Hibernia Building

New Orleans, La.



Quebec

Spruce and Hemlock

Lumber

*Cedar Shingles**Lath*

BARTRAM BROTHERS

Limited

Ed. T. Saxe, 200 Claremont Ave., MONTCLAIR, N.J.

Hope Chambers, OTTAWA, CAN., Head Office

Everything in White and Red Pine

WM. WM. H. H.

B R O M L E Y

Y E L O R B

Wholesale

PEMBROKE, ONTARIO, CANADA

Milling Facilities

Quincy Adams Lumber Co., Limited

MANUFACTURERS AND WHOLESALERS OF

White Pine, Birch, Spruce and Hemlock

Mills on G. T. Ry.—LONGFORD
KOSHEE
RAVENSWORTH
On T. & N.O. Ry.
EARLTON and
MILEAGE 156½

Toronto, Canada

801-2 C.P.R. Building,
Cor. King & Yonge

FESSERTON TIMBER COMPANY, LIMITED

Estimate of Hemlock Timber at Coe Hill on C.N.R.

Cut Jan. and Feb. 1913, and in good shipping condition — which we wish to move

17 pcs. 6x6 -12 No. 1 Hemlock	6 pcs. 10x10-16 No. 1 Hemlock
38 pcs. 8x8 -12 No. 1 Hemlock	23 pcs. 12x12-12 No. 1 Hemlock
20 pcs. 6x10-12 No. 1 Hemlock	6 pcs. 12x12-14 No. 1 Hemlock
54 pcs. 10x10-10 No. 1 Hemlock	6 pcs. 12x12-16 No. 1 Hemlock
510 pcs. 10x10-12 No. 1 Hemlock	3000 ft. 4x8-12, 14 and 16 No. 1 Hemlock.
23 pcs. 10x10-14 No. 1 Hemlock	

New Phone Number Main 3658

Fesserton Timber Company, Limited
15 Toronto Street, TORONTO

Send me Your Orders for

100 M 1 x 4 Mill Run White Pine, Box Out
190 M 1 x 5 " " " " " "
75 M 1 x 9 " " " " " "
60 M 1 x 10 " " " " " "

Your inquiries solicited

Pine, Spruce, Hemlock, Basswood, Lath

C. A. SPENCER *Wholesale Dealer in Rough and Dressed Lumber, Lath and Shingles*
Eastern Townships Bank Building, MONTREAL, Quebec

ESTABLISHED 1855

THE MCGIBBON LUMBER CO. OF PENETANGUISHENE

Manufacturers of and Dealers in

Lumber, Lath, Shingles, Etc.

HEMLOCK BILLSTUFF a Specialty of which we have the Best Assortment on Georgian Bay.

Don't wait to write. Phone us your requirements.

All stock sized or matched if required.

Our Yards are Unequalled for Drying Lumber

TOMIKO CULLS

Must Move before Jan. 1st

250 M 1 x 4 and up 6/16 No. 2 Culls

200 M 1 x 10 and 12 6/16 No. 2 Culls

5 Cars B.C. 3X Shingles in transit.

THE LONG LUMBER CO.
HAMILTON, ONT.

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

CORRESPONDENCE
SOLICITED

Mills at:

St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of
Quebec City

MARITIME PROVINCES

Fraser Limited

Fredericton, N. B.

SELLING AGENTS FOR

Donald Fraser & Sons, Limited
Cabano, P. Q.

Fraser Lumber Co., Limited
Plaster Rock, N. B.

F & M Lumber Co., Limited
Whitworth, P. Q.

MANUFACTURERS OF

Spruce Lumber
Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**



View of yard and mill—J. B. Snowball Co., Ltd., Chatham, N.B.

J. B. Snowball Co., Limited
Chatham, New Brunswick, Canada

For Sale—

200,000 of 3 x 7 and up, 3rd quality and better pine, manufacture of 1912
100,000 of Pine Boards, mill run, culls out, 4 inches wide and up 6 feet, and up, sawing of 1912.
40,000 2 inch Pine, log run, culls out, 2 x 4 and up—6 feet and up.
Two Carloads of New Brunswick Extra Shingles.
Two Carloads of New Brunswick Clear Shingles.

We invite correspondence re
"Dalhousie" Brand
N. B. Cedar Shingles *of all grades*

Special Prices for shipment to
All Ontario Points

Dalhousie Lumber Co., Limited
Dalhousie, New Brunswick
Agents for Ontario **R. Laidlaw Lumber Co., Limited**
Toronto

If You Need a Position

a classified advertisement in the **Canada Lumberman and Woodworker** will find one for you.

If You are a Capable Man

no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.
The rates are most reasonable, write us.

Canada Lumberman and Woodworker, Toronto

Edward Partington Pulp and Paper Co., Limited

Head Office, St. John, N.B.

Mills: St. John, N.B. Blackville, N.B. Marysville, N.B.

Manufacturers of

Bleached Sulphite Pulp

**Spruce, Pine and Hemlock Lumber, Laths
Hardwoods**

JOHN MCKERGOW, W. K. GRAFFTEY,
President Managing-Director

**The Montreal Lumber
Co. Limited**

Wholesale Lumber

Ottawa Office: Montreal Office:
46 Elgin St. 759 Notre Dame St., W.

**WHOLESALE DEALERS
SPRUCE**

13 Foot and 16 Foot

Lath and
White Cedar Shingles

CHRISTY-MOIR CO.
149 Broadway, New York City

JOHN P. NEWMAN
Saw Mill and Novelty Works. All
kinds of Hard and Softwood Lumber.
Dimension Stock in Beech, Maple and
Birch. Mattress and Cot Frames, Etc.
*Send me your requirements, I can furnish
you stock that will please.*
PHONE 37 RESIDENCE 15
WIARTON, Ont.

HAEBERLE LUMBER CO.
LUMBER AND TIMBER
White Pine, Norway Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and
Blinds, Cedar Poles and Ties.
Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

RAILS For Tramways, Sidings, Etc.
New and Second Hand
YARD LOCOMOTIVES
John J. Gartshore
58 Front St. W., TORONTO

Hardwood Flooring
The Celebrated Diamond Brand
End Matched, Bored,
Polished and Bundled
Manufactured by
SIEMON BROS., LTD.
For prices write
W. T. EAGEN
Selling Agent for Ontario and Quebec
2 Toronto Street,
Phone M. 2814 TORONTO

Saddle Tank Locomotives
Geared Locomotives
Steel Rails
Flat Cars
All Secondhand
Correspondence solicited
SESSENWEIN BROS.
Montreal

Lumber

**Grades Good Shipments Prompt
Prices Right**

**We have the following dry stock
which must be moved quickly:-**

3 Cars 2 x 6 M. R. Jack Pine
2 " 2 x 7 do
1 " 5/4 x 4/6 Com. and Dress. White Pine
2 " 6/4 x 6 do do
1 " 8/4 x 4/6 do do
2 " 8/4 x 6 do do

Write us for prices on the above.

**We also have a good dry stock of
1" to 3" Birch for prompt shipment.
Send us your enquiries.**

**C. G. Anderson Lumber
Company, Limited**

**Manufacturers and Strictly Wholesale
Dealers in Lumber**

**206 Manning Chambers
Toronto**

THE MEAFORD LUMBER CO.

have the following stocks, namely:
**Maple, Birch, Ash, Basswood
Elm, Spruce, Hemlock and Pine**

We deal in all kinds of Sawn
Lumber.

We will be pleased to answer
all enquiries and to quote close
prices.

THE MEAFORD LUMBER CO.
TORONTO

W E Buy, Sell and deal in all kinds
of Lumber and Timber in Can-
ada and United States: Spruce,
White Pine, White and Basswood, Ash,
Cedar, Douglas Fir, Beech, Birch, Wal-
nut, Cherry, Chestnut, Cottonwood,
Hemlock, Maple, Norway Pine, Short
and Long Leaf Yellow Pine, Oak, Red-
wood; Birch, Maple and Oak Floor-
ings, Pulpwood Ties, and Cedar Poles.

AUGER & SON
QUEBEC

**The Canada Wood
Specialty Co., Limited**

Manufacturers:

Lumber, Hardwood Flooring,
Handles, Poles, Bed Frame
Stock, Cheese Box Hoops,
Heading, Baskets, Etc.

Write, Telegraph or Telephone
your orders

Orillia, Ont.

**R. LAIDLAW
LUMBER CO.**
LIMITED

Toronto

Sarnia

Buffalo

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N. Y.

James W. Sewall

For eleven years my business has been growing. Since 1910 I have made detailed timber estimates and maps of over 700,000 acres of land. In 1913 on one contract alone I planted 200,000 trees. Experience and system aid correctness and efficiency. Let me serve you.

Timber Estimates
Boundary Surveys
Topographical Maps
Planting

16 Centre Street
Old Town, Maine

**OATS, HAY,
Bran, Shorts and Flour**

—CAR LOADS—
A. W. FAIRWEATHER
Traders' Bank Bldg., TORONTO

HOBART & CO.
CHOICE

**Southern
Hardwoods**

Cypress, Kiln Dried North
Carolina Pine

Send Us Your Inquiries
53 State St., BOSTON, MASS.
Yard at Prison Point
Cable Address "Hobco, Boston."



Guessing
on
Timber
Yield

No longer satisfies the man who wants to know what he is buying, selling, or operating. Our estimates furnish dependable information not only as to quantity, but also quality and accessibility of timber and advise as to most efficient operation.

Write for particulars.

Munson-Whitaker Co.

Consulting Forest Engineers
Chicago, 515 Commercial Bank Bldg.
New York Boston
475 Fourth Ave. 625 Tremont Bldg.
Pittsburgh, 905 Arrott Bldg.

Saw Mill Help

Competent employees for saw mills and woodworking plants are scarce. The best of them read this paper regularly. To get in touch with good men send a "Want Ad" to the

**Canada Lumberman
and Woodworker**

220 King Street West, TORONTO

"Well Bought is Half Sold"

Special Hardwood Offer

125,000 ft. 4/4" No. 1 Common & Better Birch
12,000 ft. 4/4" No. 1 Common Birch
40,000 ft. 4/4" No. 2 Common Birch
40,000 ft. 4/4" No. 1 Common & Better Basswood
18,000 ft. 4/4" No. 2 Common Basswood
16,000 ft. 6/4" Firsts & Seconds Basswood

F.O.B. Deer Lake

Dry and Well Manufactured
Good Grades Prompt Shipments

Order early and avoid delay by Car shortage

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine and Hemlock Lumber

1026-32 Traders Bank Bldg, Toronto, Ont.

Mills: Byng Inlet, Ont.

We are Buyers of

Hardwood Lumber

Pine and Spruce
Veneers Handles
(3 or more ply) (all descriptions)

**Staves Hoops
Headings**

JAMES WEBSTER & BRO., Ltd.
Beetle, Liverpool, England

London Office:
Dashwood House 9 Broad St., E.C.

Cant & Kemp

52 St. Enoch Square
GLASGOW

Timber Brokers

Cable Address, "TECTONA," Glasgow
A1 and A B C Codes used

FARNWORTH & JARDINE

Cable Address: Farnworth, Liverpool

**WOOD BROKERS
and MEASURERS**

2 Dale Street, Liverpool, and
Seaforth Road, Seaforth, Liverpool
England

A. MILLER

Dealer in All Kinds of

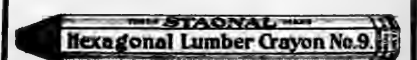
Hardwood Lumber

Office and Yard:
893 Eagle St. BUFFALO, N. Y.

**The Penetanguishene Planing Mill
Sash and Door Factory**

Planing of all kinds done by carload. Rail
road Switch in connection with mill.
All classes of building material, lime and
cement for sale.

ALPHONSE TESSIER, Builder & Contractor
PENETANGUISHENE, ONTARIO



STAONAL LUMBER CRAYONS

Waterproof Permanent
Will not wash or rub off.
SUPERIOR MFG. CO., LIMITED
93 Church Street, Toronto

FOR SALE

For Immediate Shipment

Hardwood Lumber

**Moulding, Sash and
Doors**

SPECIALTY: Dressing of wood
in transit on the Intercolonial
Railway.

The Rimouski Industrial Co., Ltd.
Rimouski, P.Q.



Watson & Todd, Limited

OTTAWA, ONTARIO

**Dry Norway
and White Pine**

All Sizes and Grades

Everything in Lumber

Wholesale and Retail

Write or wire us for your requirements

The McLennan Lumber Co.

Limited

Montreal, Canada



EMPHASIZE THE POINT

that you are selling

HOCKEN'S

HEMLOCK, DRESSED AND SIZED

The result will be satisfied customers and increase in business.

Prompt Shipments on Short Notice.

Hocken Lumber Company, Limited

Otter Lake Station, Ontario

Casey-Shaw Lumber Co.

Limited

SUDBURY, ONT.

Manufacturers of

Lumber and Lath,

Planing Mill Work

General Office, Sudbury, Ont.

The Rideau Lumber Co., Limited

Trafalgar Building, Ottawa, Ont.

1913 Sawing

4/4" and 5/4" Spruce

2 x 8 and 2 x 10 Spruce

Dry Factory White Pine—all thicknesses.

TORONTO

WE BUY FOR CASH

Mill Cuts of

Pine, Spruce and Hemlock

Write Us

C. A. Larkin Lumber Co'y., Limited

627 Confederation Life Building,
TORONTO, ONTARIO

JOHN DONOGH & CO.

Wholesale Dealers

For Sale ————— Dry Stock

1 x 4-5-6, No. 1 Spruce
1 x 8-10, No. 1 Spruce
2 x 8-10, No. 1 Spruce
1 x 4-5-6 Red Pine Flooring Strips
1" White Pine, Nos. 1 and 2 Culls
Spruce and Hemlock Lath

1205 TRADERS BANK BUILDING, TORONTO

F. N. WALDIE, President. R. S. WALDIE, Vice President.
W. E. HARPER, Secretary.

The

Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

HEAD OFFICE,
12-14 Wellington Street East, TORONTO, ONT.

YOUR CARD ON THIS PAGE

will reach your present and prospective customers oftener than your travellers.

¶ Keep your name before lumber buyers by constant advertising.

¶ Familiarity heeds business.

**Canada Lumberman
and Woodworker**
Toronto, Ontario

For Immediate Shipment—

4000 HEMLOCK TIES

3000 CEDAR TIES

100 M 10x10 HEMLOCK TIMBER

Spears & Lauder

Manufacturers and Wholesale Dealers

501 Kent Building. - Toronto

We offer the following

SPRUCE

2 x 4," 10, 12, 14 and 16' each length piled separately
2 x 6," 10, 12, 14 and 16' " " " "
2 x 8," 10, 12, 14 and 16' " " " "
2 x 10," 10, 12, 14 and 16' " " " "

Leak & Company, Limited

18 Aberdeen Chambers, TORONTO

We have the Goods. We Want Your Orders
White and Norway Pine

Laths, Boxes, Box Shooks, Wooden Pails and Tubs

"WE AIM TO SERVE YOU WITH THE BEST"

We sell only the best that the woods can grow, manufactured by the best machines that man can make.

C. Beck Mfg. Co., Limited, Penetanguishene, Ont.

For low prices and prompt shipment of

Yellow Pine Timbers
 Short Leaf Finish
 Chestnut --- Oak --- Ash
 Cypress
 New Brunswick Shingles

TRY

Fred S. Morse Lumber Co.

Box 1600

SPRINGFIELD, MASS.

Wholesale Lumber

Car and Cargo Shipments

JOHN M. DIVER

DETROIT, MICH.

"Everything in Lumber"

Lath, Shingles, Cedar Posts, Piling,
 Telegraph Poles, R.R. Ties

Timber for R. R. Construction and
 Commercial Purposes, a Specialty.

OFFICE:—413 Hammond Bldg.
 Phone Cadillac 2275

**California White Pine
 California Sugar Pine
 and Arizona Soft Pine**

Best Stock for Factory and Pattern Lumber

Ask **LOUIS WUICHET**

Room 716 Railway Exchange, CHICAGO, ILLINOIS

T. H. Garrett Lumber Co.

Manufacturers and Wholesale Dealers in

**Long and Short Leaf
 Yellow Pine Lumber**

MILLS:

Selma, La.,
 Jena, La.,
 Buena Vista, Ark.,
 Waukegan, Tex.,
 Melton, La.,

Daily capacity of each mill

350,000
 100,000
 40,000
 50,000
 30,000

1220 Chemical Building,

ST. LOUIS, Mo.

J. Burstall & Company
Timber and Lumber Merchants

**Shippers of All Kinds
 of Lumber and Timber**

Head Office, Quebec, Que.

Branch:

Montreal—Board of Trade Bldg.

J. Burstall & Company, Ltd.

57 Gracechurch St. E. C., London, England

FIR TIMBERS

HIGH GRADE RED CEDAR SHINGLES

LET US QUOTE YOU PRICES

TIMMS, PHILLIPS & CO., LTD.

Birks Building, VANCOUVER, B. C.

Pine Larch

Selects
Shops
Commons
and
Mouldings



Timbers
Yard Stock
Clears
and
Mouldings

The East Kootenay Lumber Co.

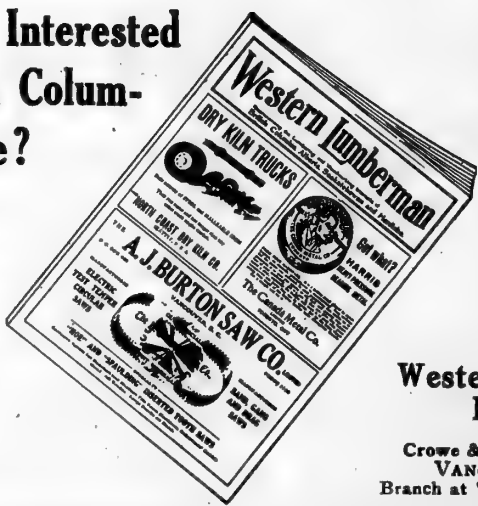
Limited

Head Office: JAFFRAY, B.C.

Mills at: CRANBROOK, B.C., RYAN, B.C., JAFFRAY, B.C.

Are You Interested in British Colum- bia Trade?

The immensity
of the Lumber
Industry will
within a few
years make
this Province
the most im-
portant in the
whole Domin-
ion.



There is un-
doubtedly a big
market for Mill
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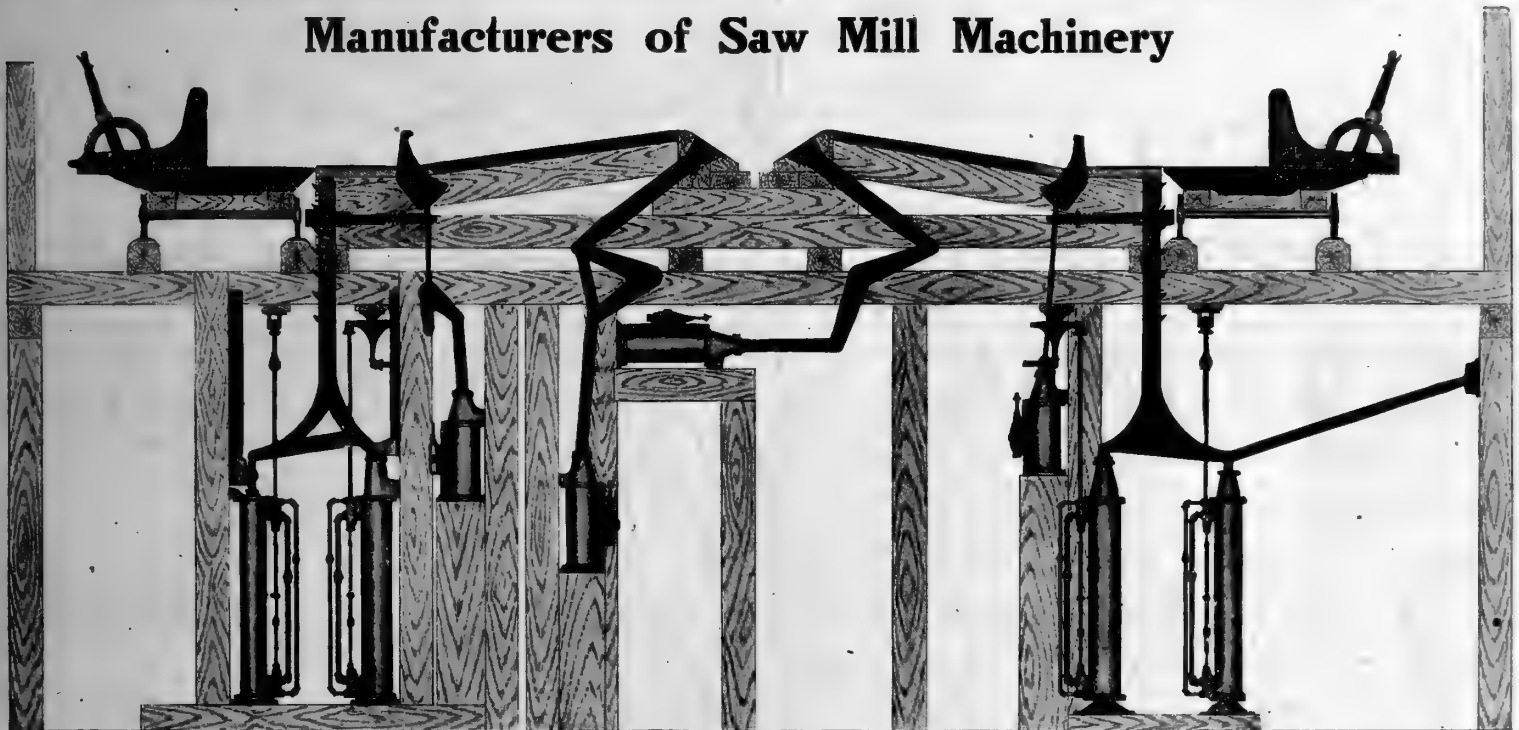
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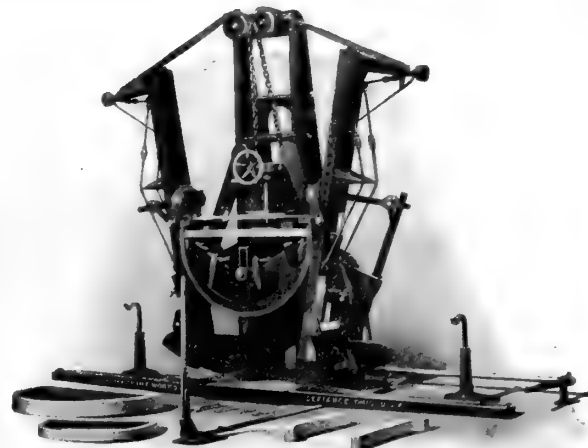
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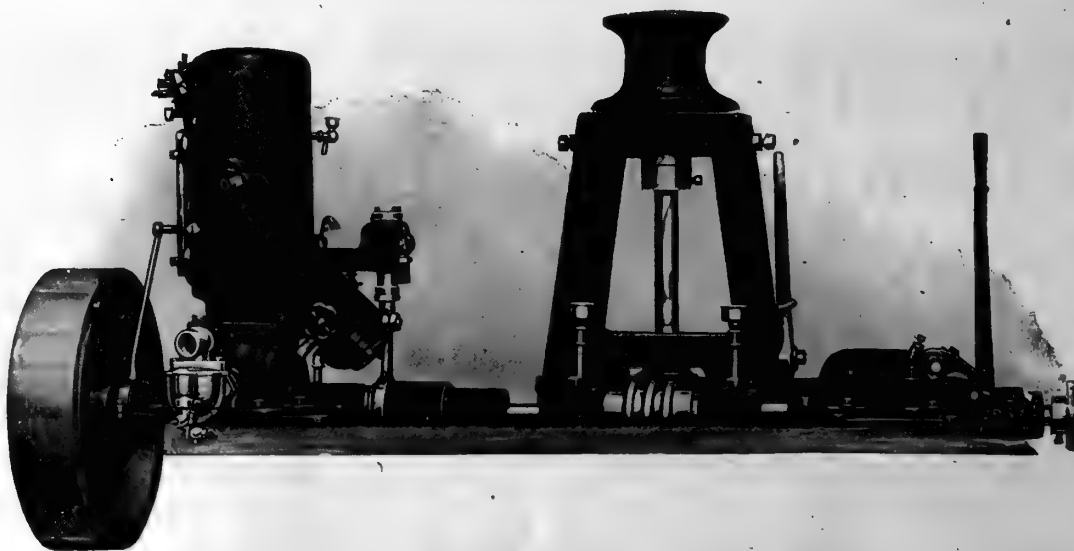
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

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Vol. 34

Toronto, January 1, 1914

No. 1

Much Timber Felled by Storm

Reports which have been received by the Department of Lands, Forests and Mines of the province of Ontario, indicate that the damage caused by the gales which prevailed on November 9th and 10th, was widespread and of a very serious nature. So extensive was the damage that it has become necessary for the government to take steps for having the timber taken out of the woods, so as to prevent the loss which would occur if it were left there throughout next summer. The force of such a storm is beyond the imagination of anyone who has not seen its effects. The damage and loss of life on Lake Huron showed that the storm approached closely to the proportions of a hurricane. The fact that it laid low many million of feet of sturdy timbers which had withstood the storms of former decades, shows that it was by far the greatest storm of its kind that has occurred in Ontario for a great many years. The extent of the country over which the storm raged makes it all the more remarkable showing that it was not of the cyclone class, but a gale of enormous proportions. Its greatest severity was through the country lying north of Lake Huron and extending from a little north and east of Sault Ste. Marie, as far east as the township of Merrick on the Temiskaming and Northern Ontario Railways. Throughout this territory more or less damage resulted and on limits which were, for special reasons, more directly exposed, the damage was very great. Thirty-four townships, on which the lands are under timber license, suffered more or less and the owners of the timber are facing the necessity of taking it out before the borers get at it next summer and make it a total loss. This will involve considerable additional expense as compared with the cost of ordinary lumber.

The government has suffered by reason of the timber felled in the Mississauga forest reserve, some of which have been bought by the thousand feet, operators paying for it only when it is cut. The

government will therefore be the losers if any of this timber is left on the ground throughout next summer. In this reserve the worst slash, so far reported, took place and inspection is now proceeding with a view to locating all the damage and having the timber removed during the present winter. Operators working in this reserve will feel that they are entitled to considerable concessions if they are to take out this timber, as they cannot be expected to accept it at the prices under which they were formerly operating, because the expenses will now be much greater. The reports show that four townships, including eight limits, were badly damaged in this reserve.

The fact that the government is taking immediate steps to provide for the removal of the down timber is of great importance. While it will mean the prevention of great loss, it will also involve the production of a large quantity of lumber during the next sawing season, which would not otherwise have been cut. Whether this will be an advantage or not, no one can say, although, if business activity returns next summer it is quite possible that the market will be able to take care of any moderate over-production. Under present trade conditions however, over-production would be a very serious matter and would have a depressing effect upon prices. The indications already received regarding the cut of logs in the woods during the present winter give reason to believe that most of the operators are counting upon taking out at least as much as they did last winter. If logging conditions become good it is likely that the cut of last winter, which was light, will be exceeded, without consideration of the timber which has been brought down by the storm, and that with this added, there will be a considerable increase.

These are conditions which ought to be understood as fully as possible as soon as the facts can be ascertained. For this reason lumbermen are hoping that the government will complete its investigations into the amount of fallen timber and announce its plans for removing it as quickly as possible, so that all doubt may be removed. Already arrangements have been made for taking out the fallen timber in the townships of Dana and Janes and on McGregor Island. Other sales will probably have to be made. Whatever steps the government takes, it is certain that lumber manufacturers and the public generally will commend them if the situation is handled promptly and the timber disposed of as soon as definite facts can be secured regarding its quantity and location.

The Timber Trade of Australia

A valuable report upon the timber trade of Australia during the years 1912 and 1911 is published in the Department of Trade & Commerce's weekly report for December 22nd. The total imports of timber (lumber, etc.), into Australia in 1912 were valued at £2,852,623, showing an increase over 1911 of £64,671. The decrease in the imports from Canada to the extent of £50,406 is attributed to a curtailment in shipments of Douglas fir from British Columbia. Inversely, the increase of £218,960 in imports from the United States is stated, by experts, to be chiefly of the same class of timber, for which mills in Washington and Oregon States quoted lower c.i.f. rates than Canadian exporters. Imports from New Zealand increased by £80,554, while those from Norway declined by £121,132, from Sweden by £14,838, and from Russia (Siberia) by £62,629. The importation of logs from Japan and Siberia shows substantial contraction in values

Retail Methods Contest—Date Extended to February 1st

The last day for submitting articles in the retail methods contest has been extended to February 1st. A number of interesting articles have been submitted already, but holidays have prevented some from entering the contest who had intended to do so and we want to hear from them all. Read the conditions published on page 38 of this issue and try to win one of the prizes.

due to the business, through high freights and other causes, not proving remunerative.

A table published with the report shows that the imports of timber from Canada during 1912 were valued at \$70,922, whereas in 1911 the value was \$121,328. In 1912 Canada was sixth on the list of countries from which timber imports were received in Australia. The United States came first with a total value of £1,314,314. New Zealand was second with a total value of £656,925. Norway was third with a value of £370,975. Sweden was fourth with a total value of £228,416 and Russia was fifth with £87,784.

Imports of wood articles and minor lines of timber into Australia during 1912 were valued at £101,371, of which Canada is credited only with £2,518. Screen doors and window screens contributed a small amount of this trade, but the heavy import charges and high customs duties gave local makers the bulk of the business. A small trade is done in Canadian tool handles. The trade in picture mouldings and veneers has, so far, proved unattractive to Canadian manufacturers. Among the imports of wood articles and minor lines of timber, the following are included:—Doors, 1912, £3,838, 1911, £137; tool handles, 1912, £44,237, 1911, £52,573; elm hubs, 1912, £5,339, 1911, £8,405; picture mouldings, etc., 1912, £34,882, 1911, £37,181; hickory spoke rims, etc., rough, 1912, £10,760, 1911, £19,077; hickory spokes dressed, 1912, £10,829, 1911, £20,969; shooks, 1912, £1,842, 1911, £1,563; box timber cut to size, 1912, £29,004, 1911, £8,714; three-ply veneers, 1912, £40,333, 1911, £22,530; other veneers, 1912, £2,046, 1911, £3,265. Imports of undressed timber in sizes less than 7-in. x 2½-in. from Canada during 1912 amounted to 3,116,707 superficial feet as compared with 6,087,411 superficial feet in 1911, showing that Canada's trade in this line fell off by nearly 50 per cent. The United States sent to Australia in 1912, timber of this class to the extent of 55,612,914 superficial feet, which was a slight increase over 1911, when the total was 55,319,403 superficial feet. A remarkable increase in imports of this class from New Zealand was shown, the total for 1912 being 17,041,159 superficial feet, as compared with 644,338 superficial feet in 1911. The total trade under this class during 1912 was 77,616,473 superficial feet and in 1911 65,223,790 superficial feet.

Undressed timbers in sizes from 7-in. x 2½-in. up to 12-in. x 6-in.

were imported from Canada to the extent of 4,798,194 superficial feet in 1912 as compared with 6,940,349 superficial feet in 1911. The imports of this class from the United States amounted to 49,449,918 superficial feet in 1912 and 44,344,141 superficial feet in 1911. A great increase also occurred in imports in this line from New Zealand, the total being 4,097,556 superficial feet in 1912 and 110,187 superficial feet in 1911. Decreases were shown in the imports of this class from Norway, Russia and Sweden.

Undressed timbers in sizes of 12-in. x 6-in. or over were imported from Canada during 1912 to the extent of 4,138,547 superficial feet, whereas in 1911 the total was 12,777,341 superficial feet. From the United States the imports of this class showed a great increase, the total being 118,313,751 superficial feet as compared with 89,258,145 superficial feet in 1911. New Zealand sent timber of this class to Australia to the extent of 2,134,210 superficial feet, whereas none is shown in the reports for 1911.

An extensive import trade was done in "logs not sawn and spars in the rough," but Canada did not figure in this trade. The largest quantity came from Japan and the next largest from Russia. The United States figured only to a very small extent. The total quantity was 18,901,739 superficial feet as compared with 29,902,216 superficial feet in 1911. New Zealand pine was imported to the extent of over 70,000,000 superficial feet as compared with 84,500,000 superficial feet in 1911.

Under the heading of "timber for making boxes and doors," the imports from Canada amounted to 465,704 superficial face feet as compared with 174,614 superficial face feet in 1911. The United States sent timber under this heading to the extent of 550,774 superficial face feet as compared with 97,068 superficial face feet in 1911. Laths were imported from Canada to the extent of 3,540,870 pieces as compared with 3,910,960 pieces in 1911. Imports of laths from the United States amounted to 26,090,876 pieces in 1912, compared with 26,302,134 pieces in 1911.

The Canadian Trade Commissioner at Melbourne, Australia, Mr. D. H. Ross, states in his report that special enquiries from Canada relative to Australia market conditions on any line of lumber or woodware will invariably receive careful and prompt attention at his office.

A Great Lumber Consuming State

Since the passing of the new tariff law in the United States, which permits the entry of lumber from Canada, free of duty, there has not been much public discussion of the advantages involved to Canadian lumber manufacturers. Apparently the period of dull business which has settled upon the United States and Canada, has offset, for the time being, any advantages which might have been expected. There have in fact been some expressions of opinion to the effect that the change in the tariff will involve no material advantage to the lumber industry in Canada. It is hard to believe that this will be the case. When business conditions again become active, we may expect to see an important increase in the demand for various classes of lumber produced in Canada, which are required in the markets of the United States.

That this will be the case is forcibly indicated by a report recently issued by the New York State College of Forestry at Syracuse, dealing with the wood-using industries of the State of New York. The first idea that comes to a Canadian upon reading this report is that the tariff has opened wide to Canada the doors of the greatest lumber-consuming market in North America. If the freedom of this market is of no advantage to Canadians, it will be a strange and unaccountable matter. The extent of the market in New York State will be appreciated by a lumberman, when he learns that it uses each year over 1,750,000,000 board feet of lumber. This is three hundred and sixty-five million more than the production of the whole province of Ontario during the year 1912. In other words the State of New York uses annually as much lumber as Ontario produced in 1912 and one million feet per day in addition. The year 1912 was an off year in the production of lumber in Ontario, but in the year 1911, the total was 1,716,-

849,000 board feet, or about sixty million board feet less than the annual consumption in the State of New York.

The value of the lumber consumed in New York State during one year is \$55,000,000, and of this total, only thirty-one per cent. is paid for wood produced within the borders of the State. The purchases of lumber from outside the State are therefore valued at \$37,950,000, which represents the demand that Canada has a chance to help satisfy. Canadian lumber could not fill this demand in its entirety, as it is a very varied demand and attracts lumber from all parts of the globe, especially from other states of the Union. But Canada's chance, now that the market is wide open, is as good as that of any other state or country and better than most of them at present, because of the nearness of the market to the great producing provinces of eastern Canada. With the Panama canal completed in the course of a few months, the lumber manufacturers of western Canada will also have cheap rates of freight to the eastern seaboard and will become an important factor in the markets of New York State.

It is interesting to note some of the chief points brought out by the report upon the woodworking industries of New York state. In the year 1850, New York led all the other states in the production of lumber. Rapidly increasing population and tremendous advancement in the development of the industries using wood, have caused a very material increase in the consumption of all kinds of forest products, so that to-day, New York State has fallen from her position as leader in the production of lumber until she is twenty-third in the list. From the position of leading producer she has now become the leading consumer and uses immense amounts of Douglas fir, western cedar, Cali-

fornia redwood, yellow pine, southern cypress and white pine from Michigan, Minnesota and Canada.

The New York State College of Forestry in preparing this report have had chiefly in mind its usefulness as an indication of the urgency of the demand for forestry practice within the state. With a vast area of twelve million to fourteen million acres out of the total of thirty-three million acres, better suited to forest crops than to anything else, it is plain, says the report, that the state will produce all of the lumber and other forest products required, when it practices forestry on its land. In the meantime Canadians may, however, count upon a steadily increasing demand for their lumber products in New York State.

The variety of uses to which lumber is put in the State is very large. Woodworking establishments are turning out everything from large structural timbers down to the finest dowels, tooth-picks and pegs. Surprising quantities of wood are being used in such unusual articles as wooden shoes, wood fibre plaster, toys, novelties, spools, all sorts of handles, etc. One of the most interesting and significant facts brought out by the report is that slabs and waste material, form-

erly burnt up or left to rot in the woods are being used in many effective ways, such as for making toys and other small articles and acid and other chemical products.

The State College of Forestry takes an optimistic view of the situation and believes that New York will return to her original important position as a great producer of forest products. If the State produced its own wood entirely, it would keep more than twenty million dollars a year within its border, making its people richer, covering its idle land with a producing forest, preserving its water flow, as well as its game and providing recreation places for the people of the great cities. This is a pleasant dream of the future, but it is also the ideal which is being vigorously approached by forestry supporters in the State of New York. It is an ideal which, sooner or later will be sought in many other cities and also in Canada. It does not involve, however, any necessary lessening of the demand for lumber from the other cities and from Canada, because the population of New York State and of all the United States must still increase enormously and provide markets for any exportable surplus of lumber that Canada can produce.

Lumbermen and Architects

Anyone who sells lumber has given thought occasionally to the fact that those who are responsible for the use of the lumber frequently are not sufficiently conversant with its characteristics to get proper value out of it. The most glaring instance is probably the architect. There are architects and architects, and some of them make a point of studying the uses and characteristics of lumber in such a way as to be able to specify it intelligently. There are too many architects, however, who do not give lumber the consideration which it deserves. An occasional effort is made to stir them up to the importance of the matter, but results are not encouraging. The difficulty is, to some extent, the fault of the architects, but lumber manufacturers and wholesalers are also partly at fault and have an opportunity of improving matters which they do not take advantage of. Architects have a natural desire to produce creditable buildings and if lumbermen were to take the same care to educate them about the uses and characteristics of different kinds of lumber the result would be a better appreciation of its value and an improved demand. One lumberman cannot do much along these lines, but a body of lumbermen can. The Canadian Lumbermen's Association, which is to hold its annual meeting at Ottawa next month might profitably consider ways and means of conducting a campaign of publicity among architects. This would be a practical business step, in keeping with the methods frequently adopted by other manufacturers of building materials, with remarkable success.

Along this line it would be possible to meet successfully, not only the competition of other building materials, such as cement, patent roofing, etc., but also the competition of foreign woods both soft and hard, with native woods. Hemlock, pine and spruce manufacturers, by the devotion of a comparatively small amount of time and money to such work could get better results than by a century of individual effort.

Something along this line was recently carried out by the lumbermen of St. Louis, Mo., where the Lumbermen's Club entertained the architects of the city and after feeding them acceptably impressed upon them some facts regarding lumber that are commonly overlooked. The architects were quick to admit that the lumbermen had performed a real service on their behalf. The American Lumberman, discussing this event editorially says:—"The truth is that lumbermen as a class have too often assumed that 'whatever is right,' or at any rate unchangeable, and they have rarely in a diplomatic and systematic manner attempted to educate users and specifiers of lumber regarding its wide adaptability. Lumbermen honestly believe that lumber is better for many purposes than some other materials that are used, and they know that carpenters and finishers do not by any means always get the best results that are easily possible when they are using wood.

"What was done for the architects of St. Louis might properly and profitably be done for the same and other classes elsewhere. The work should be carried into all channels of use through which wood should find an outlet, and the persistent attitude of the lumberman should be that his product is the most tractable and adaptable of structural materials.

"He should go further and see to it that the wood he sells is adapted to the use to which it is to be put; or, expressed in another way, that the wood bought for a particular use is adapted to that use. Much of the prejudice against wood is due to carelessness in this respect."

Many lumbermen have expressed precisely the same view to the Canada Lumberman in conversation, but no one ever seems to adopt the idea or try to push it. It is a valuable idea, which ought to be put into effect at once.

Editorial Short Lengths for Busy Readers

H. R. MacMillan, chief forester for British Columbia, reports that the forest fire damage during 1913 was the smallest in the history of the province. Practically all the eastern provinces, especially Ontario had been heavy sufferers again this year from the fire scourge, he reports, and while the weather was responsible for a share of the credit in British Columbia, the efficiency and organization of the Forest Branch of the Department of Lands had been an important factor in the excellent record made this year. The British Columbia Forest Branch now has a staff which, including forest guides and patrolmen on duty numbered 415 during the past summer. Thirty rangers and 280 guides protected the forests from fire, while eleven district foresters and twenty-three forest assistants were largely occupied with this work. Fifty-one of the staff of 415 were railway patrolmen, part of whose wages were refunded to the government by the railroads at

the close of the season, and in addition there were about sixty railway employees who were employed on patrol duty.

According to the annual statement of the traffic of the Lachine Canal, Montreal, the largest tonnage up, in single commodities, was in pulpwood and pulp, the former measuring 126,938 cords, equal to 380,814 tons, and the pulp weighing 13,100 tons, a total of 393,914 net tons. Pulpwood showed an increase of 45,178 cords and pulp a decrease of 16,242 tons. Two cargoes of pulpwood were brought from Norway during the season, one of 1,331 tons by the new lake steamer, Glenfoyle, and another of 1,400 tons by her sister ship, the Keyvive. Lumber sent up into the canal-basin totalled 101,479 tons; and down, 146,345 tons.

Talks With the Lumbermen of British Columbia

No. 4—By Douglas Fir

ALL through these talks, let it be understood that it is not the intention of the writer to be found pointing an incriminating finger toward any one in particular, but rather that the broader view shall be taken, which is the correct one, that the only incentive of the writer in giving expression to his views on the different phases of the perplexing questions with which we are constantly being confronted is, as has already been stated by the editor, a bona-fide effort on the part of the writer to help those who are in error to see the utter fallacy of trying to pursue further the course which we have been following in some stages of the game, as well as to promote the direction of more earnest and concentrated thought all along the line toward saner and more practical methods, which may be hoped to bring about at least some good to all who are engaged in the industry without doing harm, or giving offence to any. It would require more ability than the writer is possessed of, to enable one to deal at any length with a subject having the importance of this one; and affecting as it does, so many people, without hitting some one; and indeed, it does not seem as though his thoughts would be well directed, or his efforts worth while if nobody was hit. Contrariwise, it is the conviction of the writer that there is too much studied effort in these days by men upon whose shoulders responsibility should rest, to say the things only which will soothe and satisfy the superficial mind, but which do not satisfy the mind that delves down deeper into the facts and realities of the question at issue. When, however, it is understood by the reader that the only ambition of the writer is to be helpful to those engaged in the industry, may it not reasonably be hoped that nothing but good intentions will be seen in these remarks by those who may read them? The writer does not lay claim to being the centre of all the light that shines along the pathway of our pursuit, nor does he presume to offer a panacea for all the ills with which our industry is suffering, but what light he has, he is ready and willing to share with others, and if his efforts are reciprocally met in these columns, and all feeling of resentment and derision dispelled, at least some good should be accomplished.

Time Has Arrived to Study the Situation

"Never, perhaps, was the pride of our brethren more humiliated, nor the heart more completely subdued" was the opening remark of my first letter to these columns upon the subject of our lesson. When I placed those thoughts upon paper I had in mind a state of humiliation, and of subduement, which was partly of our own making, and partly due to causes which are beyond our control. Neither by those words, nor by any other remarks which I have made, or may make, do I wish to be understood as having said that we cannot conduct our industry properly and successfully, and compete with others who are similarly engaged. I am quite willing to admit that we do not compete with our neighbors across the line, for instance, but I am not willing to admit that we are unable to do so, but on the contrary I say that we can do so, and we should do so, and when anyone says that we cannot compete, nor hope to compete with the American mills, and this is quite freely stated by some, then I think it is time that some of those people should come forward and tell us why, with the same class of machinery and the same chance to select and employ brain and muscle, with no disadvantage in location, and with cheaper and better logs, we are still unable to claim our proper place in the front ranks with the best of them. If it is true, as some have already admitted, that we are not able to compete, either in quality or cost of manufacture, then here is an important lesson which we should lose no time in learning, and the greater is our shame, and the more degrading our humiliation for not having learned it long ago.

I believe that if success is expected to follow any undertaking, it is necessary that we should find sufficient pleasure in said undertaking every day to cause us to devote proper thought, and expend the right kind of energy to achieve success. One of the greatest hindrances of success in the present day is that pleasure is not associated enough with the work as the days go by, but too often only calls around on the day that the pay envelope is handed out, and this does not apply alone to the ordinary workman, but equally or more elsewhere, for do we not often see indifference exhibited by those who should be the dominating force, or generator, as it were, in their respective concerns, of that flow of knowledge which should be constantly and unsparingly diffused throughout the different circuits of our organization, and which should be so alloyed as to fuse the different circuits, or departments into one at the proper fusing place, thus precluding the possibility of what I term short circuiting, or one department cutting into another at the wrong place. Do we not, I ask, too often see

this force grounded as it were, and running rampant with pleasure and vainglory in other directions? There is nothing more important than this fusing in the proper place, and then keeping the wires loaded to their capacity with energy.

Jumping at the "Rush" Order Bait

Some managers, and sales managers seem to think that the best way in which this energy can be supplied, so as to keep a constant pressure all the time at the manufacturing end is by reaching out after those orders which are marked with such a big "RUSH" that perhaps the saner, or more practical heads of other mills have passed them up. The inexperienced jumps at them, because you know it keeps their workmen under pressure. Could anything be more fatal to best results? If these men were capable of understanding the sacrifices that are made of valuable material, they would probably change their views, but usually such men think they know, and so they must know. Instead of this enthusing the practical men in the mill, who are forced to do these things against the dictates of their better judgment, it more often has the opposite effect, and acts as a deterrent to their energy. What some of the men who seek to supply that kind of energy in order to bring about big results, don't know about the business in which they are engaged would make a very much larger book than would what they do know. My last letter to these columns showed in this connection how heavy losses could be incurred, often running into thousands of dollars per month in a mill of good capacity, by this kind of energy, so I will not go into figures here, but suffice to say that the subject is worth thinking about.

Many a man who has money invested in our industry at the present day feels that he has invested in a "gold brick," while in reality he has done nothing of the kind, but has invested in a legitimate and honorable business which is only brought into disrepute by such causes as the above and others, which in other pursuits entailing such large capital expenditure would not be allowed to exist.

If I were to start in to build battleships, or other craft, it would make no difference how many millions I might have behind me, it would only be a question of time when the undertaking would prove a failure, because I do not know anything about building ships. Yet how many people do we see go into the lumber business, and perhaps assume the management of their own or their friend's investments without having had any experience in the business whatever, and still these people expect to compete with those having years, or perhaps life long experience. It is right along here that many of the jagged rocks are found, and many a comparatively safe craft has had her paint scraped upon them.

The Importance of Business Sense

I believe that there is probably as much to be learned about the construction and successful operation of a large lumbering industry as there is about ship building, and since history repeats itself with such frequency in the lumber business, does it not seem as though, if all those who have to do with the management of our lumbering concerns were experienced in the business, much of the presently existing danger of being dashed upon the rocks of overproduction could be avoided and many of the wrecks, whose remains are strewn along the sands of time, have been prevented. Being old and experienced navigators they would understand the signals, and would take heed in time, to anchor in safety behind the rock of common sense, and this could have none other than the effect of pouring oil upon the troubled waters, and the fury of the storm would be of short duration. Of course I know that there are always some reckless ones who might venture out, and thus prolong the siege, but they would be comparatively few who would do so without cause, and if right conditions existed, and common sense prevailed they would have no excuse.

It is a poor apology, it seems to me, for running our mills double time in the face of a weak, or declining market, to say that we must do so in order to reduce our overhead charges, and protect our stock, or bondholders, and right here, for the sake of argument let us make some theoretical calculations, which may to some seem far fetched, but which will serve as illustrations. Let us suppose that I control a sawing capacity in one, or several mills aggregating 500,000 feet of lumber per day of 10 hours, and I conceive the idea that by running day and night I can reduce my overhead charges \$1.00 per thousand feet. I do so, and I make that reduction. I am now sawing 1,000,000 feet in the two shifts, but I find that the market cannot take care of the excess over the natural output, and competition being keen, the buyer has taken cognizance of the situation, and has noted the effect that my

action must have. Consequently, anxiety on the part of the buyer ceases, while that of the manufacturer increases, until soon we find that the prices at which sales are being made are \$2.00 per thousand feet lower than before I started to run double time. What have I gained. I have actually lost \$1.00 per thousand feet in my own operations, and have caused my neighbors to lose \$2.00 per thousand feet on their operations, because I have pulled the price down that much, and their methods are unchanged.

Nothing Lost By Trimming Sails to the Wind

If I could speak so that all the lumbermen in the Dominion and those that are to come could hear me, my advice would be to get together and study the waters that are to be navigated, and never attempt to fly more canvas than the ship is rigged for. I can see no good reason why our industry can not be kept comparatively healthy, if it is conducted with a view to taking care of our own interests, instead of letting our greed so blind our eyes and understanding that we militate against ourselves. I believe that, if there is not sufficient business to keep our mills running throughout the whole year, some concerted action should be taken for closing for a period each year, the same as they do in the east. I believe that we should start out with the right amount of canvas to enable us to do this, and never should we be found carrying so much canvas that we could not stop in safety before an approaching storm. I believe that we should so trim our sails that we could afford to do this, and as I have already shown, we would not lose anything thereby. When we stop and think of it, this seems like a simple solution of the difficulty, for we could then not only be practically assured of a steady market, but we would also steady the nerves of the logger, which in itself is a matter worthy of thought. Now, there is uncertainty throughout the ranks, but if we could decide upon such an arrangement as the one described for tying up as soon as we saw a storm approaching, everybody would know what to expect, and in all likelihood the storm would blow over without doing any damage.

When we stop and compare eastern men and their methods with our own, is it not apparent that more thought and attention is given to the management of affairs there than here, by those who are actual investors? There they have to plan a year ahead all the time. They were planning, and actually working months ago on their log supply for next year's operations. But this is not all the difference we see, for amongst the characters conspicuously emblazoned upon our memories as mill men of the east, have we not read with regret how one in his 88th year was injured while directing men in the works? Necessity did not drive this man to do that, for later did we not see him writing his cheque for \$125,000 for a charitable institution? We who have watched him closely have found that his greatest pleasure has been in directing his business, and while he has had plenty of setbacks, yet he has weathered the storm. He is a natural born director. Long may he live to enjoy the fruits of his labor.

Things are different here. It is more of a hand-to-mouth game with us. We do not have to plan our log supply so far ahead; are not dependent upon snow to get the logs out of the woods, nor upon spring freshets to get them to the mills, and yet with all our advantages we admit that we are unable to cope with conditions. Practice in the east has almost invariably been to acquire timber holdings, and then begin operations modestly, and in this way build up a business on a sound basis, adding to and increasing as conditions demand, and producing much of the capital, as they have gone along, with which to increase their operations. Here, we acquire the capital, and timber perhaps, then we build and equip a large and fully arranged plant, and then demand suitable conditions, and while nature by her slow process is bringing those conditions about, the interest is eating us up.

Bad Business Habits Soon Become Chronic

As we are passing by the sales department let us have a look in and see what some are doing here. There are times when it is interesting to look into some of these places. Does it seem reasonable that any one should resort to the practice of changing the grades in order to secure business? It is common knowledge amongst salesmen that this is often done, and business is obtained and held by giving the customer higher grades than those figured in his bill. This is only one of the methods resorted to. There are many more, but I believe this is one of the most common, and I fully believe that it is more common than many of us are aware of, and is carried on to such an extent whether prices are maintained or not, that it is now considered by many to be a diplomatic trait, or accomplishment, without which the salesman can hardly be successful. This is all wrong, and only goes to show another weakness which is prevalent here, that is not found in other business. Just as practice becomes law, so is this custom fastening itself upon us, until soon it will be considered as a legal demand. Some may think this is not true, but it is true notwithstanding. Resorting to any such tactics as this in figuring a bill only denotes weakness, and inability on the part of the salesman to clinch the order by correct methods, and by convincing the customer

that he is ready to give him a square deal, and that he expects the same. There is much work to be done by way of re-adjusting these things, and re-educating the trade, which ought to be done. No salesman should be allowed to employ any such methods, and it should be made a criminal offence against his employer.

We have certain prescribed rules governing the amount of sap that is allowable on the different kinds and grades of lumber, but as yet we have nothing laid down for our guidance as to how much sap is allowable on the surface of a salesman before he is reduced to a lower grade. I often think of this when I see a salesman meet a prospective customer, and salute him as some of them do after this fashion, and in his own familiar way, "good morning," "what do you know?" To which I have heard the customer reply, perhaps more in disgust than otherwise, "I don't know anything." This always reminds me of a young man who was sitting near me on a steamer one time. He was sitting there apparently in a deep study when an acquaintance came along and stopping, asked him "what have you got in your head now young man?" The other looked up and calmly replied "nothing Sir, absolutely nothing." Now, if, when this salesman walked into his prospective customer's office the salutation had been something like this, "God morning Mr. Brown," "good morning Mr. Jones." "I must apologize to you Mr. Brown for being later than I expected, I was detained over at Smithville longer than I expected to be when I wrote you, but I looked up some nice business in consequence. I hope, however, that I have not caused you any inconvenience, and that I am not too late to merit your favors in our line." Which in your opinion Mr. reader will impress Mr. Brown most, the gush of sap, or the businesslike appeal? If you were in Brown's place which would be most likely to get your order?

All these things, as well as many others which I have not been able to mention at this time have their bearing, and as a body of men all having the one aim and ambition in life, it behooves us to relegate to the fathomless depths of oblivion anything, let it be form or formality, trait or practice, which is not conducive to our obtaining best results for the coming year. Let us by one united effort, and by concentrated action of body and mind, lift the industry in which we are engaged to a plane inferior to none other. Let us not forget the fact that, dull as trade may become in all lines, those engaged in handling other lines do not start out on a campaign of giving away their goods. The prices of saws and all supplies remain stable, or higher if they choose, and we must use them just the same. Would not the same rule work out in our case if we but knew how to work it? I aver that it would. We have been easy long enough, and have gone along in a rambling way, knowing that everything we bought was higher, and what we had for sale was lower. One would naturally think that we liked it that way, since the remedy is in our own hands, but we have gone on and on, grabbing after the dollar which we might have known we had no chance of reaching, until now we have, I believe, fully awakened to the realization of our position. We have been acting insanely, and now that we have come to our senses, and have plenty of time to reflect, let us figure out whether it would be better to have nine or ten months of good sound business, or twelve months twice a year of business that has to be kept alive by feeding it upon its own substance.

Over-Development the Main Trouble

The trouble seems to be that we have been trying to force an unnatural growth. It is a case of over-development in our line, with under-development in all other things in the country. We must have use for a thing before it can be either valuable or useful, and that is our trouble to-day. Could we but plant the germ which would grow up and branch out all over the land into great and healthy demand upon our forest products, then our industry would grow without any forcing, but just as long as we try to force our products in double quantities upon an already glutted market, just so long are we wasting our time in trying to nurture a tree and to make it grow a large top in a confined space. It is unnatural, and never will be satisfactory under those conditions.

I do not wish to infer by anything that I have said that we have no capable men in the lumber business in this province for I know that this would not be true, and I have tried to confine myself to facts as I see them. What I do say is, that there are some who are incapable, and partly by their incapability, and partly by other causes we have been led into devious ways, until, at the present time we are all lost, and it will need a Moses to lead us out of the wilderness. It has been a case of the tail wagging the dog for a long time in this industry, and if it is kept up much longer the dog will die. The proper time to start the work of getting out a good balance sheet is on the first day of January, and if that balance sheet is kept in mind the whole year through then there need not be half as much anxiety shown when it is passing through its final stages, as is sometimes the case. If you like a good balance sheet, then do not forget it and allow holes to be torn into it throughout the whole year, for if you do, it will not look well when it is finished. These are plain facts, friends, but they are spoken with a hope of doing good, and not evil.

The Commercial Importance of Birch

Physical Properties and Industrial Uses of the Most Important Canadian Hardwood—
Forming One-Third of Total Lumber Cut

By R. G. Lewis*

CONTRARY to the common belief, maple is not Canada's most important hardwood. It heads the list of hardwood lumber sawn in Ontario but is exceeded by birch in Quebec and the Maritime Provinces. For the whole of Canada birch is the most important hardwood lumber and forms at least a third of the total quantity sawn. Even in Ontario this wood forms over fifteen per cent. of the hardwood produced.

In 1912 Canadian sawmills cut over a hundred million (100,267,000) feet of birch lumber. Canadian railways purchased eight thousand and birch cross ties. Over fourteen thousand cords of birch were distilled to produce wood alcohol, acetic acid, etc. A least five million cords of birch were used for firewood.

It is highly probable that more birch is cut in Canada in a year than any other wood although this would be a difficult statement to prove, as large quantities of this wood are cut and consumed locally and no official statistics are available of its local use. There is no doubt of the truth of the statement that this is our most important hardwood.

There are eight different species of this tree growing in Canada but three of these form the greater part of the wood of commercial value. Many of the species are mere shrubs and others are found only in isolated stands and are rare and unimportant.

The important point in connection with the geographical distribution of these birch species is that, speaking generally they are found further north than any of our other native hardwoods. The Western Peninsula of Ontario was at one time almost a pure forest of hardwoods. Many of these: chestnut, tulip, black gum, walnut, sycamore, black locust, mulberry, sassafras and Kentucky coffee tree, were never abundant and were confined to the north shores of Lakes Ontario and Erie and the valley of the St. Lawrence. These trees formed the northern fringe of the great hardwood forest of the middle West States and would not thrive further north. Other hardwoods, like maple, beech, oak, basswood, hickory, ash, elm, butternut and ironwood, were more abundant and were found in some cases as far north as the Height of Land. The oak, hickory, basswood and butternut have been cut to such an extent that they are now, or soon will be, commercially extinct. Even such trees as maple, elm and ash are being rapidly cut and are not found north of the Height of Land in either Ontario or Quebec. The outlook for a future supply of these woods is very uncertain. Birch is found mixed with all these hardwoods in southern Ontario and in addition to this is fairly abundant further north.

A Vigorous Reproducer

It is a well-known fact that birch is one of the first trees to come in and establish itself on burned and cut-over areas. The seeds are very minute and light in weight and are easily carried by the wind. When they fall on cleared areas and come readily into contact with the mineral soil they germinate quickly and the trees gain a foothold long before the seeds of other species can be carried and deposited on such areas. This augurs well for our future supply of birch in Canada when we consider the enormous areas in this country that have been burned and cut over in the last twenty-five years, and which are unfit for agricultural purposes. When we thoroughly realize that our supply of many such hardwoods as oak, hickory, cherry, walnut, butternut and basswood is strictly limited we begin to see the need of adapting the more plentiful hardwoods to our use. Birch is a wood that is little understood in Canada. It has been discriminated against in the past on account of the difficulties encountered in its seasoning. These difficulties on the whole are the result of ignorance of the physical properties of the wood. If the same care were exercised in seasoning birch as is given to oak, hickory, cherry, and other hardwoods the result would amply warrant the extra expense. Modern mills using improved methods have little difficulty in seasoning this wood.

Sweet Birch (*Betula lenta*), which is also called black and cherry birch, is the most valuable of the birch species. It is more important commercially in the United States than either yellow or black birch and forms the greatest part of the birch lumber on the American market. The tree grows in the Maritime Provinces but is not abundant in that region. The greatest quantities are cut in southern Ontario and in Quebec (where it is called by the French name of *Werisier*). It is nowhere as abundant as the next described species, yellow birch, and does not grow as far north.

This wood is the heaviest and hardest of the birches and is strong

and compact. The grain is fine and the texture fine and even. Wavy and curly effects are common and add greatly to the value of the wood for ornamental purposes. Sweet birch is noted for its peculiar satiny lustre which is due to the light lining of the wood pores. The lumber shrinks considerably in seasoning and is apt to check. The surface takes a high polish and the wood works easily but is very perishable in most situations.

Physical Properties of Sweet Birch

While the physical properties of the lumber cut in Canada have never been studied scientifically up to the present time the figures by Sargent for this wood in the United States can be used for comparing the species. They are as follows:

Weight of dry wood, 47.47 pounds per cubic foot.

Specific gravity 0.7617.

Ash, 0.26 per cent. of the weight of dry wood.

Fuel value, 102 per cent. of that of white oak.

Breaking strength (Modulus of Rupture) 17,000 pounds per square inch.

Factor of stiffness (Modulus of elasticity) 2,042,000 pounds per square inch.

Yellow birch (*Betula lutea*) is cut in Canada in large quantities than any of the other species as this tree has a much wider distribution than sweet birch and is of more commercial value than paper birch. The tree is found throughout the Maritime Provinces and its range in Ontario and Quebec is bounded on the north by a line commencing at Anticosti Island and running north of Lake St. John and Lake Abitibi and following the north shore of Lake Superior to the Lake of the Woods. The tree is fairly abundant everywhere south of this line. The wood of this tree is very similar to that of sweet birch but is lighter in weight and color and lacks some of that wood's satiny lustre. It is nevertheless heavy, hard, and strong and takes a beautiful polish. Sargent gives its physical characteristics as follows:

Weight of dry wood 40.84 pounds per cubic foot.

Specific gravity, 0.6553.

Ash, 0.31 per cent. of the weight of dry wood.

Fuel value 88 per cent. that of white oak.

Breaking strength (Modulus of Rupture) 17,000 pounds per square inch.

Factor of stiffness (Modulus of elasticity) 2,478,000 pounds per square inch.

This would indicate that this wood has a lower specific gravity, a lower fuel value and a greater percentage of ash than sweet birch. Its breaking strength is, however, identical, and its factor of stiffness greater than that of sweet birch so the real differences between the two species are comparatively unimportant. These two woods are generally sold together in Canada. Considerable quantities of birch are imported from the United States and these imports are largely made up of sweet birch but the greater part of the native wood is probably yellow birch. In some cases manufacturers demand sweet or cherry birch but the majority of purchasers do not discriminate between these two species which are sold simply as "hard birch."

Hard birch is used in greatest quantities in Canada by the manufacturers of hardwood flooring. Birch and beech are often sold together and birch, maple and beech together make up over half the hardwood flooring used. Birch goes also into other forms of interior house finish being valued for stair material, panelling, wainscoting, moulding and ceiling.

A Favorite Furniture Wood

Sweet birch is the favorite birch for the manufacture of furniture, cabinet wood and fixtures. The wood can be stained to imitate many more expensive woods, such as mahogany, oak, cherry, and walnut. If this staining is done carefully it takes an expert to distinguish between the real and the imitation. In such cases there is no dishonesty in the imitation if the products are sold as such, because well finished birch furniture is quite as useful and ornamental as that of the more expensive woods. The birch improves with age and being a fine grained wood its surface remains smooth and lustrous when oak becomes roughened and furrowed. In the United States birch furniture is considered quite as valuable as oak. Some of the finest and most beautiful furniture in the world is made in Sweden out of birch of a species similar to our Canadian wood. Oak and mahogany are fashionable at the present time just as walnut and cherry were in vogue a few years ago. When the excellent qualities of birch

*Of the Forestry Branch, Ottawa.

are more fully understood this wood will probably take its place among the finer finishing woods.

At the present time in Canada birch is used for the cheaper grades of furniture only. Large quantities are used for frame work and "inside work" on the more expensive products where the "outside work" is either oak or mahogany. If birch received the same careful treatment and careful finishing it would be quite as popular for outside work.

In the vehicle industry in Ontario birch is taking the place of elm for heavy hub stock as it has been found that this wood will stand the pounding and will hold spokes, and that it has the advantage of being much cheaper and more abundant than elm. Heavy spokes are being made of birch instead of oak and hickory by many Canadian vehicle factories. The wood has been used for other gear stock for some time and is especially valuable for heavy work. For panel and box work both in heavy and light vehicles birch is valuable and is becoming more popular. Automobile manufacturers use this material for dashes, seat frames and door trimmings. In the Maritime Provinces birch is the most important vehicle wood used.

In the construction of cars and coaches birch takes an important part, more as a finishing wood than for framework. It is often finished in imitation of cherry for the interior panelling and finishing of electric cars and second class coaches. The framework and heavy box work of agricultural implements is made of birch in many cases. This industry resembles the vehicle industry in many respects and the wood is used for similar purposes in both.

The manufacturers of handles and brush backs utilize enormous quantities of birch annually as the wood is hard and tough and holds its shape well.

In wood distillation birch is used in Ontario to almost as great an extent as for hardwood flooring but the trees cut are mostly of small size that would not produce saw logs. Slabs and waste from sawmills could be utilized for this purpose to a greater extent than they are at present. The wood for this purpose is not selected for its physical but rather its chemical qualities and all species of birch are used.

Birch is used for slack barrel hoops and occasionally for staves and heading, yellow birch is probably the most important species for this purpose. Boxes and crating of hard birch are manufactured but softer woods are usually preferred for boxes, and tougher woods for crating. Birch is too valuable for other purposes to be used extensively by this industry.

Birch Interiors for Musical Instruments

The manufacturers of musical instruments such as pianos, players and organs use birch for the interior parts including keys, actions, frame work, and inside casework only. The use of this wood for the outside case work, legs and carvings has not been reported although piano manufacturers in the United States have been finishing pianos in sweet or cherry birch for years and value the wood more for its appearance than its strength and rigidity.

Boat builders in Ontario do not favor this wood although they use a few thousand feet in a year. In the Maritime Provinces more birch is used by boat builders than any other hardwood and is used for frame work, planking and inside work. In the manufacture of blocks, sheaves and ship fittings birch is used in greater quantities than any other wood.

Without going into the details of each industry it might be well to add that hard birch is also used by the manufacturers of wooden novelties, woodenware, patterns, laundry accessories, fruit packages, refrigerators, coffins, half tone blocks, picture frames, pumps and sporting goods.

Birch in the form of veneer is used in the furniture and vehicle industries and by piano manufacturers. Built-up chair seats, berry boxes, crates and baskets are made largely of birch in this form. The wood for this purpose is steamed and peeled by a rotary veneer lathe or sliced. It has the advantage of peeling smoothly and of making a very tough veneer.

The Uses of Paper Birch

Paper birch (*Betula papyrifera*) is an inferior wood to the hard birches for most of their uses, but is much more abundant. This tree in Canada ranges south of a line running across the northwest border of the Labrador Peninsula, skirting the shores of Hudson's Bay and running northwest to the Arctic Ocean at the mouth of the Mackenzie River. Very few trees are found farther north than this. The wood is valuable in some cases on account of its whiteness, softness and toughness, in which it exceeds the hard birches. The wood is light, strong, hard, tough, and compact with reddish brown heartwood and nearly white sapwood. The lumber is graded for the quantity of sapwood present. Sargent gives its physical properties as follows:—

Weight of dry wood 37.11 pounds per cubic foot.

Specific gravity 0.5955.

Ash 0.25 per cent. of dry wood.

Fuel value 80 per cent. of white oak.

Breaking strength (Modulus of rupture) 14,900 pounds per square inch.

Factor of stiffness (Modulus of elasticity) 1,841,000 pounds per square inch.

By the figures it is seen that paper birch is lower both in stiffness and breaking strength than the hard birches. The wood is also much more perishable in moist situations.

Probably the most important use to which this wood is put is in the manufacture of small turnery. Spool wood is exported in large quantities from Canada to Europe and the United States and some spools are manufactured in Canada. Birch is valuable for this purpose on account of its compactness. It is fairly hard but does not dull the lathe tools as quickly as other spool woods and when seasoned it holds its shape well. Large quantities of dowels are made from this wood and are used locally and shipped to Europe. Shoe pegs are made either by splitting them out of blocks or by cutting them from birch veneer. Shoe stands (the small flat pieces of wood used to support the arch of a shoe) are made from rotary birch veneer. Toothpicks and skewers and clothes pins are also manufactured of this wood.

Excelsior and wood wool are made largely from poplar in Canada but large quantities of paper birch are also consumed by this industry. The softness of the wood and its long tough fibres fit it particularly for this purpose.

Whenever possible, paper birch is substituted for the hard birches and much of this wood is doubtless cut and sold mixed with the two hard birches although no statistics are available of its production as lumber. It is used for flooring and interior finish and for parts of furniture and vehicle work where great strength is not required.

Other Varieties and Their Uses

Of the numerous other species of birch little need be said as they are nowhere abundant and are cut and sold mixed with the three species described.

White birch (*Betula populifolia*), also called grey and wire birch, is confined to the Maritime Provinces and Eastern Canada, where it is noted for its promptness in taking possession of abandoned fields and burned and cut over areas. The wood is light, soft and weak, but is probably tougher than the other birch species. The wood is used for the less important commodities manufactured from paper birch and is valuable for hockey sticks on account of its toughness.

Blue birch (*Betula coerulea*) seldom reaches commercial size and is similar in its uses to white birch.

Western birch (*Betula occidentalis*) is probably the largest birch tree of America but it grows only in British Columbia and is rare and unimportant even there. The wood is used locally for rough lumber, fencing and fuel and is similar in its qualities to paper birch.

Alaska birch (*Betula Alaskana*) is the most important fuel wood in the Yukon and its range extends south eastward across the Rockies and to the valley of the Mackenzie and Saskatchewan Rivers. The wood may be cut into lumber locally but is not of commercial importance.

Black birch (*Betula fontinalis*) is found in the Rocky Mountain district of British Columbia and Alberta and is of no commercial value except for fuel and fencing. There are only ten birches that reach tree size in America and all of these grow in Canada with the exception of two. Black or river birch (*Betula nigra*) grows in the Eastern States from Massachusetts to Florida. It is sold mixed with other hard birches and may form a part of the birch imported into Canada. It has none of the attractive surface features of sweet birch but is a very strong, serviceable wood.

Kenai birch (*Betula kenaica*) grows on the coast of Alaska and is of no commercial value or importance.

Birch an Important Forest Cover

Apart from the commercial uses of birch in the industries this tree has great economical value as a forest cover. Its seeds are very minute and light in weight. They average about 450,000 or nearly half a million to the pound and are supported on a thin membranaceous wing which greatly facilitates their being carried by the winds. Authentic cases are known where the seeds of this tree have been carried several miles by the wind and have sprouted and established themselves. This probably gave rise to the belief among some old-fashioned woodsmen that this tree reproduces itself spontaneously on burned over lands without the medium of a seed. The seeds ripen on the trees from spring to the middle of summer and are carried by the wind over large areas. If they fall on burned or cut-over areas or on abandoned farm lands they can reach the mineral soil with little difficulty. This enables large numbers of the seeds to sprout and grow into hardy seedlings by the fall of the same year in which they were born on the trees.

Such an early start in the year gives these seedlings a great advantage over most other trees and accounts for the fact that birch

is almost invariably among the first trees to establish themselves on cleared areas. The tree, however, is usually short lived and is soon shaded out by pine and spruce which is established under the protection of the birch and gradually overtops it and kills it for want of light. Few trees cause less inflammable litter than the birch and this tree has been planted to great advantage along railway lines and highways where it acts as a natural fire guard, keeping the ground bare and damp beneath its shade.

Birch is rather a slow growing tree and takes over a hundred years to reach saw log sizes in most localities. Yellow birch in eighty-five years will have an average diameter of eight inches and can be used for handles, spool wood, distillation, pulp, mine props, fuel and fencing. It takes a hundred and eighty years to reach an average diameter of eighteen inches. Paper birch grows more rapidly in its youth but is shorter-lived than yellow birch. It reaches the eight inch diameter in about fifty years.

Wind Felled Much Valuable Timber

Ontario Govt. Report Shows that Storm of Nov. 9th and 10th Caused Widespread Destruction

The Ontario Department of Lands, Forests and Mines has received a number of reports regarding the damage done to Northern Ontario timber by the recent heavy gales and has issued the following report upon the situation:

The wind storm which occurred on the 9th and 10th of November, 1913, appears to have extended in greatest severity from a short distance north and east of Sault Ste. Marie through the country lying north of Lake Huron, and extending as far east as the Township of Merrick on the Temiskaming and Northern Ontario Railway, which is south of Temagami.

On lands under timber license the blow did more or less damage on about thirty-four townships. The timber blown down, if not cut and taken out this winter, would be attacked by the borers next summer and become a total loss. The Department immediately called the attention of the licensees of these townships to the damage, and they are taking steps to save the blown down timber, although it will entail considerable additional expense over ordinary lumbering.

With respect to Crown lands, there has been considerable damage done in the Mississauga Forest Reserve. Here the parties lumbering bought the timber by the thousand feet, paying for it as it is cut. The worst slash that occurred is in this Reserve, and particularly where parties are operating. We have had careful inspections made and are insisting upon the damaged timber being cut this winter, although the operators are claiming that some concessions must be made if they are to take it all out.

Eight Mississauga Limits Suffered

In this Reserve eight limits, equal to four townships, were badly damaged. The Reserve contains a large body of timber and we are having other parts of it examined to see if there has been any damage done there, and we shall have full reports in a short time.

North of Sudbury the damage is not as bad as was first reported, and we have arranged with the contractors for the construction of the Canadian Northern Railway to cut the damaged timber for their work. On the Vermilion River in the Townships of Beulah, Marshay and one or two others, considerable timber is damaged, but this will be arranged for with the railway contractor, who requires considerable timber for construction purposes.

Then, on coming further east, in the Townships of Janes and Dana, north of Lake Nipissing there is a serious blow down of about five and a half million feet board measure of fairly good timber. This blow down was on four lots in the Township of Dana and about fourteen lots in the Township of Janes. There was some standing timber left upon the lots where the blow down took place. The difficulty here was that the timber was very badly slashed down. There were no roads into it, and snow might be expected at any moment. It seemed hopeless to expect any large operator to create an organization, cut roads, etc., for the small quantity of timber there. To call for tenders and give any time to examine would mean it would not be got out this winter.

Timber Sold to George Gordon & Company

Messrs. Geo. Gordon & Company, Limited, were lumbering close to this timber in the Township of Dana, and they made an offer of \$5 per thousand feet board measure for the blown down timber, and \$12.25 per thousand for whatever timber might be standing on the lots where the blown down timber was. This we considered as advantageous an offer as could be got, and the Department determined to take the responsibility of accepting it. The effect will be that this timber will be taken out this winter and will not go to loss.

On the islands in the Georgian Bay, particularly McGregor Island, on which there is considerable timber, the wind did great damage. We have advertised the timber on this Island for sale. There is no difficulty in calling for tenders there, as it is easily accessible.

The same thing has happened on Johns Island, another large island. If any of the other islands have been damaged steps will be taken to sell the timber on them as soon as they can be reached.

There does not seem to have been any damage in the Rainy River or Port Arthur Districts, or north of Lake Superior, nor in the Temagami Forest Reserve or north of there,—so far as the advice from our agents goes. Every effort has been made to get at the extent of the damage and the whereabouts of the blown down timber, and to arrange for cutting it this winter, so that the loss caused by this totally unprecedented catastrophe may be reduced to a minimum.

British Columbia's Progress in Forest Protection

At the meeting of the Western Forestry & Conservation Association held in Vancouver, B.C., on December 15th and 16th an interesting address upon "The Protection of British Columbia's Natural Resources" was delivered by Hon. W. R. Ross. After reviewing the work of the Lands Department of British Columbia, Hon. Mr. Ross dealt in some detail with the work of the Forest Branch. Probably 70 per cent. of British Columbia's two hundred and fifty million acres, he said, was under some kind of timber. Timber was destined to be the greatest crop that could be raised in the province, and since the bulk of the forest land was Crown property and the chief source of public revenue (yielding three million dollars annually) the protection of the forest and the most scientific method of obtaining revenue from it, were two of the most important functions of the government. Eight and one-half million acres of the forest lands had been placed under a license system which called for payment by the operator at the time when the principles of modern forest finance require that it should be paid, namely, when the timber crop was cut and marketed.

He believed that they had in British Columbia an almost ideal method of co-operation between government and private interests, in the form of the forest protection fund and the organization that the fund had rendered possible in the province. During the past year, over one hundred and fifty million acres of the total area of British Columbia had been placed under some form of protection. They had maintained over this area a skeleton organization capable of being recruited to any extent that fire danger might require. Under the excellent weather conditions during 1913 the eleven forest districts had been provided with thirty rangers, and two hundred and eighty guards and patrol men; another one hundred men being at their call at short notice if required. This force had experienced no difficulty in controlling the situation, for, though nearly six hundred fires had been reported, three out of every four had been extinguished without extra cost. Full use had been made of this favorable situation. Numbers of the men had been drafted to improvement work. Fire fighting had cost only \$9,000. Patrol expenses involved another \$190,000. Out of the total fund for the year amounting to \$350,000 they therefore had an ample balance for construction work. The department had thus been able to construct since August, 1913, 1,000 miles of horse trails, 168 miles of foot trail and 360 miles of telephone line, 10 cabins and 10 mountain lookout stations, the cost of these being \$67,000.

Anglo-Newfoundland Company Had a Good Year

The Anglo-Newfoundland Development Company, one of Lord Northcliffe's subsidiary companies, has issued its report for the year ended August 31st last. The company built large pulp and paper mills in Newfoundland for the purpose of supplying the British papers in which Lord Northcliffe is interested.

The mills, when in full operation, are capable of supplying more than the requirements of the papers, but it is stated that no further extension of the company's operations will be made during the continuance of the present Newfoundland tariff. The gross profits of the company, after making provision for depreciation, amounted in the past year to £65,000, which compares with £51,200 in the preceding twelve months, and £34,700 in 1910-11. Debenture interest absorbs £24,800, and a further £10,000 is set aside under the provisions of the trust deed for the redemption of the debenture debt. This leaves a net profit of £30,100, which compares with £9,800 last year, when, however, although there was no charge for debenture redemption, a sum of £16,400 was written off out of revenue to cover the expenses of the issue. The result is to leave the company with a balance in hand, including the sum brought into the accounts, amounting to £45,200, which is carried forward. The directors state that the output from the mills is increasing, while the quality of the paper and pulp produced continues to give satisfaction, which is shown by the fact that the whole of next year's production has already been sold. In 1911-12 the company's profits were earned on an output of barely three-fifths of the capacity of the completed mill, while the company suffered as a result of the shipping and coal mining strikes. The production last year should have been very considerably larger, but while some improvement has been made in the cost of manufacturing paper, this was offset by a further rise in the price of coal and partly also by high freight rates.

The Reader's Viewpoint on Trade Topics

Opinions on Questions of General Interest—An Edger Drive Problem—Waste in the Woods

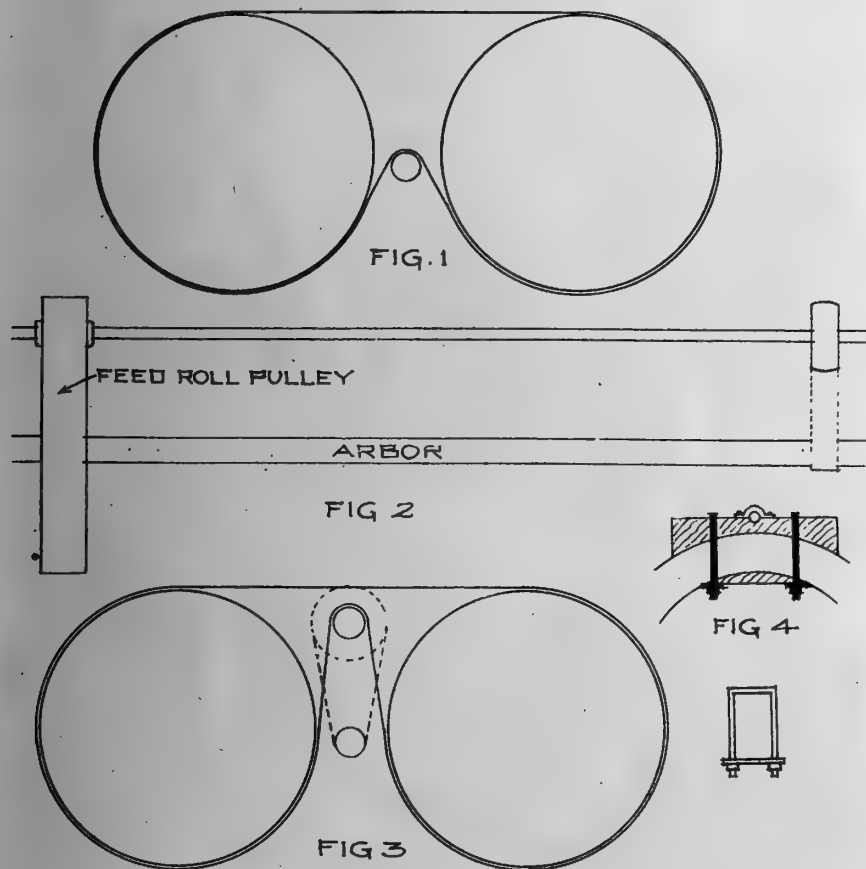
Articles or letters to the Editor of the Canada Lumberman, dealing with trade conditions, or discussing questions of interest to manufacturers, wholesalers or retailers of lumber are always welcomed by our readers. Here are a few that have been received lately:—

Edger Drive for Hardwoods

Editor Canada Lumberman: Haliburton, Ont., December 16th.

Driving problems are numerous in any sawmill and their solution is always important. In a mill in which I have worked the feed rolls of the edger were driven as shown in Fig. 1. This proved to be too fast a feed for hardwoods, of which there was a considerable quantity in the mill's output. The feed belt was run as slack as possible, consistent with giving service. Still there was much difficulty owing to the saws stopping while edging hardwood.

Finally a shaft was placed across the top of the machine, above the arbor and on one end of this was placed a pulley of the same diameter as the arbor itself. On the other end a pulley of twice this diameter was placed. It was driven from the arbor as shown in Fig.



2, and the feed belt was driven as shown in Fig. 3. A guard was placed in front of the belt running on the arbor so as to prevent stock from striking the belt and breaking it. Of course this had the effect of narrowing the available room for material passing through, but the advantages secured more than offset this.

This device has now been in use for three seasons and has eliminated the difficulty above mentioned.

To support the shaft, wooden caps were placed on top of the frame and babbitt used in the customary way. These cap pieces are held in place by means of U-shaped clamps, as shown in Fig. 4. —James E. McCormack.

Dimension Spruce Firmer at Boston

Editor Canada Lumberman: Boston, Mas., Dec. 19th.

There is not, perhaps, a great deal to be said about a market which has been a slow and dragging one, although it would seem as though, in the last week, trade has been somewhat better, in the vicinity of Boston, probably owing to the long spell of warm weather this fall.

The summer spruce mills—that is, dimension mills that have been

shipping green lumber, are shutting down and there being little or no snow, the winter mills are not starting up yet and temporarily there is a scarcity of spruce, which is reflected somewhat in prices on dimension stock, which are a little higher. This advance is generally felt to be temporary—in fact is quite usual at this time of the year—that is, if the snow is late in coming.

Low grades of southern pine and North Carolina pine have been selling very cheaply in this market, and have been weak. Also shingles have been in slight demand and weak. We understand, however, that there is to be a large shutdown in Washington and to some extent in British Columbia and the production of these shingles will probably be greatly reduced for a time.—Shepard & Morse Lumber Company.

Two Sources of Waste in the Woods

Editor Canada Lumberman: Ottawa, Ont., Dec. 17th.

I have been trying to think what the real sources of waste are in lumbering operations, and I can think of but two. The first I do not think will be understood by any but a practical lumberman, and that is the cutting up of the trees into logs after they are chopped or cut down. In too many instances the logs are measured off 16 ft. and 13 ft. regardless of quality, whereas a great saving could be made by carefully separating the good from the bad, and making as many good logs out of the trees as possible, then taking the best you can out of the coarse or cull material which is left. This I consider one great source of waste in woods operations.

Now there is one more serious waste and it is the only one I know of, namely, that under the Crown Lands regulations as they exist today, the lumbermen are forced to take out small, crooked and very coarse tops which do not pay the expense of handling, and here there is an enormous waste. Years ago, it is true, the reverse was the case and comparatively good logs were left in the woods to rot, but I am not aware of any lumbering operations where this is the case today, but the other extreme is gone to and a great waste, both to the individual lumberman and to the country exists, consequent upon taking out many logs that do not pay the expense of taking out and sawing.—W. C. Edwards.

The Fraser Bryson Lumber Company, Limited, Ottawa, Ont., have selected an exceptionally attractive calendar as a souvenir to send to their friends at the new year. One of Philip R. Goodwin's splendid paintings of backwoods scenes is used to decorate the calendar. The title of the picture is "In Strange Waters," and it represents a couple of canoeists shooting rapids at the headwaters of the Ottawa. The picture is very realistic and at the same time an exceptionally fine work of art. It will appeal forcibly to all who have had anything to do with logging operations or cruising in Ontario's Northland.

What Constitutes "Absolute Accuracy" in Cruising

Editor Canada Lumberman: Montreal, P.Q., Dec. 16th.

Our friend, Mr. Sewall, seems considerably peeved at my statements. While I have no desire to enter into anything but a friendly discussion of this topic, I may just briefly state however that by "absolute accuracy" in timber limit estimates of areas (such as we have them in Canada) comprising anywhere from one hundred to one or two thousand square miles, we must perforce be practical and mean just so accurate as it is possible to be in such work, and by our method we claim that when we state a certain area contains say one million cords of pulp wood, it will be found to be so nearly that amount that for all practical purposes it will be "absolutely accurate." Now, surely anyone with common sense can understand that. What would be the use of paying say \$30,000 extra for a forest survey in order to determine whether there is an error in value equivalent to or less than the amount expended in trying to discover it, especially when in lumbering operations a wide margin of waste is overlooked. Opinions may differ but I would certainly not encumber my work by the use of calipers. May I ask Mr. Sewall how he measures the height of trees? Would he use step-ladders and a steel tape, or would he just estimate? If he estimates the height of a tree, why shouldn't he estimate its diameter, which he must concede is more simple than estimating the height.

Such methods as suggested by Mr. Sewall in timber cruising and forest surveys have no practical application here and while they have been observed in one or two isolated cases, I may be pardoned if I state that they caused considerable amusement to a great many.—R. O. Swezey.

Logging Superintendents' Convention

Interesting Practical Addresses and Discussion of Working Problems at Meeting
Held at Green Bay, Wis.—Machinery, Methods and Equipment

The first meeting of Northern Logging Superintendents, held under the auspices of the Northern Hemlock and Hardwood Manufacturers' Association took place at Green Bay, Wis., on December 6th.

Mr. E. A. Hamar, president of the association occupied the chair and about 70 members were present representing more than 40 different concerns. In opening the meeting Mr. Hamar referred to the history of logging in the north, discussing the great changes which have taken place during the last twenty years. Logging, he said, which was in reality the most important part of the lumber business, was probably the least understood, on account of the primitive conditions under which they formerly operated, when timber was delivered to lakes and streams on short hauls and floated down to the mill. A second reason for the logging business being the least understood in connection with lumbering, was the remoteness of logging operations from headquarters. During the earlier days of the logging business, the most difficult problem for the lumbermen to solve was the flooding of the logs from the remoter territory to the sawmill. Some of the engineering feats of the pioneer lumberman in building dams and reservoirs for flooding logs down the narrow and rocky streams had been little short of wonderful. He had seen streams which had carried millions of feet of logs year after year, down which a novice would think it impossible to float a canoe.

During this period labor, except for river driving, was cheap. The same crew of men that went into the woods in the fall usually stayed until spring, so that the foreman was not confronted with the problem of constantly breaking in new men, which in itself under present conditions was a rather serious and expensive problem. Supplies were very much cheaper than at present, and as the food served was much plainer and not of so great a variety, the cost of feeding men was much less. He had figures in his possession, compiled for a set of camps for the years 1892 and 1893, showing an average cost of 23c. per day per man for food. It was now costing the average lumberman double this amount.

The conditions of this earlier period were gone, in his opinion for ever, and they must now face new ones. Logging, as carried on to-day was a very complicated undertaking. The woods superintendent had under his charge a large investment in horses, machinery and railroads, including the necessary rolling stock. In order to get the best results each division of the logging department must be nicely adjusted to the others, so as to balance and involve no delay in supplying a mill with logs. The two most serious problems confronting them to-day were the constantly increasing cost of labor and of food for the men. He believed that camp cooks would have to be taught to change their methods of cooking and supplying their tables.

The higher cost of labor and supplies had come to stay for some time. They would probably not see for a great many years the low schedules that prevailed some years ago. The only way to reduce the cost of labor would be to increase its efficiency and to do this, with the low grade of labor now available would be a very difficult matter. One of the best methods was the preparation of daily cost sheets for each camp. These however, were not practicable except where a camp was logging direct from the stump to the mill. Another useful method was one that could be applied to camps cutting and skidding and which consisted of requiring each gang of sawyers and each skidding crew to turn in the number of logs sawed or skidded daily. With this count before him each night, the foreman could tell pretty nearly whether his men were giving him a fair day's work.

Every camp employing eight or more saw gangs should have a saw boss. The saw boss would not only increase the amount of the daily cut, he would save timber, by preventing wasteful cutting. In any lot of logs cut and lying in the woods to-day, ready for the skidders, where there was no saw boss, you could find 14 to 16-foot shakey butt hemlock logs that should have been long butted or cut 20-foot so that when the shake was cut off in the mill there would still be 16-foot lumber instead of short stuff. You could find hardwood cut 16-foot long where an 18-foot log would have saved 2 feet and cleaned up the tree to the crotch. You could even find 4 feet wasted where two 10-foot logs would have cleaned up the tree.

Every camp with eight or more teams of horses should have a barn boss. A good man in this position, by careful methods of feeding would save his wages in feed and the horses would be kept in better condition and sickness avoided.

The Steam Log Hauler

An interesting address was delivered by Mr. Geo. N. Harder, of

Rib Lake, Wis., general manager of the Rib Lake Lumber Company, upon the use of the steam log hauler. His company use a Phoenix log hauler, manufactured by the Phoenix Manufacturing Company, Eau Claire, Wis. They estimate that the engine is good for forty miles per day. Under load it would make four to five miles per hour and when returning light, its speed was five to six miles per hour. They had never used the machine to its full capacity. Their maximum load per trip was fifteen loads of logs, approximately 80,000 feet and three loads of bark or about thirty cords, making a train of eighteen loads. Their maximum haul for one day had been 150,000 feet of logs and fifty cords of bark on a seven-mile haul. During the present winter the machine will be making three trips daily between one of the camps and the mill, a distance of seven miles. They estimate that it will be taking the place of nine single teams and teamsters. It is manned by three men, an engineer, a fireman and a pilot. Horses are used in bringing the loaded sleds from the skidways in the woods to the spotting ground, where they are assembled and made up into a train. During the winter of 1911 and 1912 the company operated a log hauler on a six-mile haul, which cost 16c. a thousand, including wages of the crew, fuel, oil, repairs, etc.

At the conclusion of Mr. Harder's address a number of superintendents gave their experiences with steam log haulers.

Running a Logging Camp

An address prepared by Mr. E. S. Hammond of the Hammond-Chandler Lumber Company, Rice Lake, Wis., was read by Mr. R. S. Kellogg, secretary of the association, in the writer's absence. The address dealt with a number of interesting phases of woods operations and was in part as follows:—

An agreement should be made before the cook goes into woods and a copy forwarded to the foreman. This agreement should state explicitly the services he is required to render, about how many men he is supposed to handle, how much help he is to have and what he has represented himself to be. This gives the foreman an idea of the situation so that no misunderstanding will arise. He will represent himself to be excellent, a good cook and capable of handling a certain number of men, but when he gets to the woods he is generally a different breed of dog altogether. If the foreman is expected to check the cook this will prove a failure in most cases as this part belongs to the man in authority in conjunction with the foreman.

In the past our cooks have always been in the habit of serving two, three or four kinds of meat, as they deemed best to satisfy the crew. We have started in this fall with strict instructions in writing that only one kind of meat be put on the table at one time. They will often try to overcome this with the excuse that they had some left over. For your information, I wish to say, there is always something left over. One of the most wasteful items we have to go up against is too much food being cooked ahead. It gets old, mussy and sour, unfit to eat and is thrown away. Sometimes they have hash, stew and roast at the same time. This should be strictly forbidden. Of course some leniency and allowances should be made the cook, but the idea is practically to hold to one kind of meat on the table at same time.

Pudding, Cakes, Pie and Sauce

I feed the men all the cake, pie, pudding and fruit for sauce they can eat. I put two kinds of sauce on if necessary for the reason that I believe in filling them up on anything they will eat outside of meat. Pies, cakes, pudding and fruit sauces are not usually thrown in the slop pail and if too much is cooked ahead, it will generally be cleaned up. Some people advance the idea that men are not able to perform the same amount of labor on sugar products as on meat and potatoes. I don't know but that one gets just as much labor out of the men under such conditions as he does by confining them to pork, beans, beef and potatoes. Too heavy food is just as bad as too much pie and cake. We give them ginger snaps, sweet, graham and soda crackers.

Recently we purchased one hundred pounds of strained honey at 9½ cents per pound. I believe this will be used on bread, biscuit and pancakes and be good healthy food.

All canned and package goods should be standard. Some people seem to think you can put any old thing on the table for lumberjacks, but we believe everything you serve in camp should be standard stuff. It should be new stock, as it goes along way toward preserving the health of the men and we find they like it. We give them canned tomatoes, peaches, apricots, apples, grated pineapple, etc. We do not furnish any extracts but let them use the grated pineapple to season puddings, cakes, rice, etc. They seem to like the prepared

breakfast foods and use condensed milk with it reduced 8 to 1 with lukewarm water. Don't use cold water.

"I find that sardines, dried fish, salmon, rice and cheese go very well. Cheese can be used in conjunction with macaroni. If the cook adapts himself to getting up these little side dishes, they are very acceptable and enjoyed by the men. A good book can be furnished to each cook.

Cleanliness and Management

It is a universal custom to feed men well in the woods and the principal point in feeding is to have a good clean cook. Give him good tools to work with, good stove and camps, then see that he makes good and keeps everything clean. As I said before, don't depend too much on the foreman to line up the cook. The woods superintendent should attend to this. Don't wait for men to utter kicks but do the fault-finding yourself. If one cook can't make good, give him his time and find someone who can. Cooks sometimes start in well but get lazy, dirty and wasteful and cranky. Don't put up with a cranky cook. Make it a practice to go into the cook camp every day and stand around a few moments to get acquainted. Your presence on the job is something. Keep him line up today, tomorrow and the next day. That is, by careful management, and always use due courtesy. They are usually human beings and like human treatment. The idea is to show you are interested. If the cook gets angry, as he sometimes does, try to reason with him, but if there is no reason in him, hire another as soon as possible and let him go. If he is going to quit on the spot, don't pay him a cent but sue for damages. However, be sure to make damages large enough. It don't do to let any cook run the bluff on your pocketbook and you. In the logging business you will find that one year you have trouble with cooks, next year cooks will be all right and loaders will go wrong. Next, loaders will give good satisfaction but you will have trouble with teamsters and next year you will have a lot of trouble with the foreman. In other words, in employment of labor, there is always trouble and it is up to the superintendent or employer to stand behind and with the foreman.

We hire men under two wages and issue slip (copy of agreement) to the employee. A carbon copy of the agreement is kept in the hiring book. Whatever understanding we have in regard to wages and the services he is to render is written on this slip. The law is such that you are compelled to pay an employee what you hire him for, provided he works at the job you hire him to do. Any change of jobs makes change of wages, provided the employer so wishes. If a man is hired at \$26 per month to swamp and he is put to top loading he can collect wages as a top loader; or if he is hired at \$40 per month to top load, and he is unable to perform the work, you can put him at swamping and he can collect only wages that you are paying for such work. Again, if you hire a man by the month under the law you are compelled to give him employment for a month and he is compelled to work a month, provided he does as he agrees. If you fail to give him employment for that length of time, he can sue for the full month and collect. If he fails to work a full month, you can refuse to pay him for services performed and sue him for damages for nonfulfillment of agreement. In hiring under two wages, we find there is a good chance to pay a poor man off at low wages. Again, the question must be distinctly kept in mind of paying a man full value for his hire. If you pay a good man good wages, he will always like to come back and work for you. It does not look well or work out well to pay the same wages to all kinds of laborers; that is, to pay the poor employee the same as you pay to a good one. Treat the men on the square when they treat you on the square and be the first to give this good treatment. If they try to give poor service, come back with poor pay and a law suit if necessary.

Settlements

Right here comes in the question of who is going to settle with these men and who is going to make wages with them when judgment day arrives. The superintendent will have to attend to some of this. Unless the foreman has a very strong back, he will break down if he attempts to do it all. You might say it is impossible for the superintendent to be on the job all the time. I will admit this to be a fact but he can arrange his office and other things in connection, so that he can assist somewhat and if it comes to a showdown, the greater part should be assumed by the woods superintendent when it comes to settling the wage question, in conjunction with timekeeper and office force.

We aim to send money to wives and families of married men just as fast as it is earned if they so desire, but try to size up the young fellows. If they are in the habit of coming in to the office and asking for \$2 to \$5 as fast as it is earned, we head them off on the start by asking, "What do you want to do with it?" If they can not give good explanation we refuse to give them money. If they don't like it and quit, we give them what they have coming.

Advancing fares is another very important question. Stop this advancing fares for employment agencies and labor. If men have not

money to pay their own fares, you will find they will take the blind baggage or tie pass and in the end, they will be very careful to save a little money to get them out where the job is. The idea of lumbermen advancing \$500 in fares and not receiving over \$100 back is a foolish proposition. In the spring you will have a nice big warehouse full of old dirty baggage. Employment agencies hold up before your eyes the fact that the other fellow is advancing fares and if you want any men, you will have to do the same. This is all nonsense. There are only so many men to go around and if one camp gets filled up there will be enough for the other fellow, or if there are not enough to go around by doing business this way, there would not be enough by doing business the other way. It is a matter of seeking its own level. If we expect to do our logging in future by advancing fares through employment agencies, we may as well make up our minds that it will cost \$1 per thousand extra to log.

This men-getting business is a trade by itself. If the lumbermen would spend \$1,000 in advertising it would pay 500 per cent. on the investment. Extend your advertising east, west and south.

Size of Camps

Build your camp to hold about 30 to 50 per cent. more men than required, for the reason that usually during the months of November, December and January, or about 2 1/2 months, there are plenty of men to be had at \$26 to \$30 for common labor. Hire everyone that comes along, fill camps full, buy extra tools, lay out all your work ahead, cut roads, grade them, cut out skidways and landing. If you hire teams build barn for twice teams necessary. The idea is to log as fast as possible for about three months. After February 1 to 15, men and teams will quit. If you have taken all these precautions your work will be well ahead.

On the other hand, if you construct small camps and small barns, you are always behind with your work, short of men and teams and always hunting after these things, offering higher wages to get them than you would have to otherwise.

Logging is like war, especially if you are a logger. The idea is you have to get logs on the landing or "bust." No man wants to "bust," or make a failure of his business. In logging, you must always go ahead and keep going. Treat everybody right if he will let you. If he will not, you are not to blame.

Now comes the question of the superintendent. Is he big enough for the position? I am afraid he is not. If he is not capable of filling this position, it means expensive logging. It is much harder to obtain a good logging superintendent than it is to obtain a good man to run your sawmill. I believe that if the superintendent were financially interested in the company, it would be better for the company. He should have the brains and diplomacy of a United States president and the fighting qualities of a John L. Sullivan.

During the discussion upon this address Mr. Lamont Rowlands, of Chicago, of the Goodyear Lumber Company, Tomah, Wash., submitted the following statement of the cost of food at one of that company's camps for one year, based on about one hundred and fifty men:

Material Consumed	Amount	Cost per Man per day
Beef, fresh	400,670	\$.0872
Beef, corn	102,727	.0223
Bacon	114,702	.0249
Salt pork	62,359	.0135
Sausage	24,994	.0054
Lard	115,005	.0250
Butterine	55,319	.0120
Flour	131,948	.0287
Potatoes	87,062	.0189
Brown sugar	50,843	.0110
Granulated sugar	96,309	.0209
Coffee	57,083	.0124
Tea	21,373	.0046
Beans	42,908	.0093
Tomatoes	34,175	.0074
Peaches	24,346	.0053
Miscellaneous, of small proportions.	240,613	.0523
Total	1,662,436	.3611

An address was delivered at the afternoon session by W. E. Hallenbeck, of Wausaukee, Wis., of the J. W. Wells Lumber Company, dealing with "Steam Ground Skidding." Mr. Hallenbeck said that he believed the time had come when they should, so far as possible, get away from the old methods of horse logging. After leaving the pine limits which had been cut out in the earlier days of logging and going after the hardwood, they found themselves confronted by several obstacles which had not been reckoned with. First, instead of fairly level sandy soil, where railroad building was comparatively easy, they had now to open a rough, hilly, stony country which yielded hardly one-third the number of saw logs that the pine lands yielded. It was very difficult and far more expensive to get in a rail-

road. Here and there they would find deep pot holes and ravines out of which horses could not draw the heavy hardwood logs. Thus, when these difficulties were developing, the old-time lumberjack commenced to forsake the northern camps, going either south or west. The steam loader had helped greatly, but still the problem remained of getting in the logs. The advent of the skidding machines had then come to their assistance. He was strongly of the opinion that steam skidders were only in their infancy, but had come to stay. What they wanted was more and better machines. There were practically only two types on the market today, the ground skidder and the overhead cable way. It was his opinion that the cable way was the coming machine.

His own experience was based on the use of the ground skidder, of which they use the one known as the Lidgerwood. With railroads laid out 1,200 feet to accommodate horse skidding, an enormous amount of work was entailed in getting in the tracks, as well as the employment of large crews of laborers which were very hard to get. As near as they could estimate, the grading of such branches cutting and clearing right of way, laying steel and surfacing included, cost about \$1,500 per mile. Figuring this mile of track with a skidding width of 1,200 feet per team gang, would give 145 or 150 acres, containing approximately 1,500,000 feet of logs. Thus the railroad cost about \$1 per thousand feet.

With the skidder they went out twice the distance for logs; therefore eliminating half the cost of the railroad. They covered 300 acres to the mile of track, harvesting about 3,000,000 feet of logs. A machine costs a lot of money, but so did horses. The cost of the quantity of cable used would probably balance the hay and oats. Skilled labor was necessary to run the skidder, but better results were obtained and the men probably stuck to their jobs if they were paid good wages. All in all, he was strongly in favor of the steam skidder. In building their railroads, his company now used a railroad ditcher, which with a crew of five men and a team would build one mile of grade in heavy soil, with a great many boulders, average cuts and fills, 14-foot crown to allow the steam skidder to go through cuts, including pulling of stumps and casting them out, at the very small expense of \$425 per mile. They had thus reduced their grading cost by two-thirds.

Logging With Horses

The next address, by Mr. J. W. Gleason, of Goodman, Wis., of the Goodman Lumber Company, was entitled "Logging with Horses," and was one of the most interesting addresses presented at the meeting. Mr. Gleason spoke as follows:—

To the modern logging operation in Wisconsin, Michigan and Eastern Canada "the horse" is an absolute necessity. Good machinery is very important but more important still is a good force of able-bodied horses. Efficiency is the greatest requirement—a term which applies to every branch of the logging game.

My experience has been that too little attention is given the care and handling of horses in the lumber woods. In the "Old Pine Days," or before modern methods were known, horses were worked during the winter months and turned out to pasture all summer to recuperate. Everyone had the idea that they could not do any logging unless they half killed their horses. A man was not considered a teamster unless he could make a team eat three bushels of oats every day and could pound them on the head for 18 to 20 hours every day. There are more horses ruined by over-feeding than by any other cause. The average teamster of today, in that respect, is like the newly married young lady, who—upon entering the meat market was asked: "How much steak do you want?" She replied: "I don't know whether I want a pound or a whole cow." The teamster does not know whether a horse needs a quart of oats for supper or a whole bag full. To get the best results, horses should be kept in good condition. Their teeth should be gone over at least once a year by a competent veterinary. We keep a man at each camp whose sole work is to look after the horses—he feeds them three times a day; keeps the barns in good sanitary condition; looks after the harness—in fact everything in connection with the horses, and he gets to know every horse. He is the only one around the barns who has access to the oat bin and the harness room. We find that by having one man in charge, who has gained his knowledge by actual experience, we get better results. It eliminates, to a certain extent at least, acute diseases—such as spinal trouble, cholera, etc., etc., which is common among horses. We buy the best oats and hay; feed bran once a week (Saturday night) and we do not feed any stock foods of any kind whatever. We work our horses all the year round—or an average of 300 days of ten hours each. I will give some facts and figures to show what horses can accomplish if properly cared for and handled. The figures will relate to the year between November 1st, 1912, and November 1st, 1913.

What Well Kept Horses Can Accomplish

We operate two camps having twenty-four teams in the logging service—or twelve teams in each camp. One team is used for hauling water to the horses and lunch to the men. One team is used for railroad work exclusively. This leaves ten teams in each camp to do

the skidding. They do not do any loading as we operate two McGiffert loaders. The following includes the two camps or twenty teams skidding 312 days—or 6,240 days for one team: Logs, Doyle scale, number of pieces 228,349, 13,948,550 feet, which tallied over the trimmer board measure 21,090,562 feet; 12,578 cords of 4-ft. chemical wood (birch and maple); 1,754 cedar telegraph poles and 8,569 cedar posts.

I will give you the different items of horse feed, etc., and what they cost—in other words, what it costs us for horse flesh and the amount of work they do. We value the teams at \$600 each or \$14,400. One thing we have learned by experience is—that the average life of a horse, in the lumber woods, when they are worked the year round, is from four to six years and one thing they do claim is, that to keep a man driving a team that is broken down is a waste of human energy, which is the most expensive commodity that is used today in every successful operation. Human energy and brains go hand in hand. No lumbering operation is successful without both.

Depreciation, interest, etc., 25 per cent.	\$3,600.00
Oats consumed, 11,395 bushels	4,899.37
Hay consumed, 196 tons	2,828.70
Bran consumed, 12 tons	218.30
Veterinary services and medicine	221.00

\$11,767.37

A Practical Camp Accounting System

These figures are absolutely correct—for I made them myself. Our company has the best accounting system under the sun. They do not use the old debit and credit system. They just charge everything and credit nothing. We have a little accounting system of our own in connection with the woods department. Supplies purchased, supplies on hand, inventory every month, distribution of labor, material, etc., etc. We don't wait until the 15th or 20th of the following month to see "where we are at," for about that time the general manager calls a fellow in "on the carpet" and shows him a little slip of paper containing some figures, then he straightens up in his chair and says: "John—(Tom, Dick or Harry, as the case may be) it is costing too much to log; too much to build the railroad; too much to feed the men—and this, that and the other thing is costing too much—and nine cases out of ten a fellow has to sit there like a bump on a log, not knowing what to say. So the only way is to keep an accurate tab on everything as you go along and when you find that anything is costing too much—"cut it out" before the "Boss" gets "next to it."

The average cost of logging per thousand feet from November 1st, 1912, to November 1st, 1913, Doyle scale, was as follows:—

Sawing	\$1.10
Swamping . . . . .	.75
Skidding	1.28
Loading . . . . .	.30
Tools and repairs . . . . .	.25
Depreciation, horses, equipment, etc. . . . .	.90
Roads and spurs	1.00
Supervision, overhead . . . . .	.25

\$5.83

The average cost according to the general books was for ten months, everything included for the twelve month, Doyle scale, was \$5.94. The difference between Doyle scale and lumber tally was 44 per cent., so that the net cost for the ten months was \$4.13, lumber tally over the trimmer.

Mr. Geo. H. Holt, of Chicago, president of the Holt Lumber Company, Oconto, Wis., delivered an address upon "Standardization of Accounting." It was high time, he said, that lumbermen should systematize this important branch of their operations and it was now an opportune time, because labor was more plentiful, costs of operation were excessive and business prospects were bad. Individual companies here and there might have systematized their operations properly, but most operations were conducted in a very crude manner, so far as the accounting was concerned. The trouble with most accounting systems was that the important information could only be secured when it was too late, after the horse had been stolen. Even then it was not in such shape that it could be utilized and applied in subsequent operations. Most of the knowledge was in the heads of individuals who had had the experience, and it could not be utilized by others.

Wages meant nothing as a test, or guide to efficiency without a record of the product. The total cost of logging was of little value unless one knew in which department there had been efficiency or inefficiency. There must be a just balance between the cost of ascertaining these facts and their value when ascertained.

The logging camp was a most deplorable example of waste material and labor, coupled with the crippling of the energy which it was designed to produce and maintain.

There was greater need for the State to prescribe the quantity and variety of food to be served in order to conserve the health and

lives of camp employees, than for the State to protect employees from possible injury from operating machinery.

Lumber organizations might profitably unite in employing some skillful person or organization to train camp cooks and to establish standards of rations for every meal and for every day in the week which would give variety and maintain comfort and strength of the men.

Standardization of forms for use in organizing and conducting logging operations, the purchase of supplies, equipment and apparatus, keeping track of the condition, location and quantities, checking waste, loss or theft, and fixing the responsibility for these things upon someone who could be called to account for them, were indispensable of efficiency. It was foolish to buy supplies and material without a test of quality. The waste resulting from neglect of this fact was a tremendous element in the cost of operation.

An important discussion then took place upon welfare work among woods employees and a motion was passed to appoint two committees, one to investigate welfare work and another to investigate questions relating to the standardization of accounting methods.

A census was taken to discover the wages paid for the different classes of woods workers. It was shown that the wages were fairly uniform, running from \$26 to \$40 per month and board. Most of the companies found their chief difficulty to be securing good men and all were disposed to pay good men all they were worth. Swampers were commonly paid \$26 to \$28; loaders, \$36 to \$40; teamsters, \$30 to \$35 and sawyers \$26 to \$32. A few were paying teamsters \$40, but these were extra good men who had been long in the service.

Quebec Forest Fire Report

The annual report of the Minister of Lands and Forests of the province of Quebec for the year ending June 30th, 1913, contains an interesting report by Mr. W. C. J. Hall, superintendent of the Forest Protection Branch. After the disappearance of the snow in the spring of 1913 at the end of May, and the beginning of June, Mr. Hall reports, conditions became very dangerous as the rainfall was light, and so menacing that I found it necessary to have the whole staff out in the field working over time, warning the people, and in every way possible endeavoring to prevent fire. Our efforts were fairly well rewarded.

One of the worst fires we had, was that which started on a settler's lot near Ste. Rose. It ran over about five or six other lots, and eventually communicated with railway property on the Q. C. R., there consuming about 8000 cords of pulp wood, several buildings, some lumber, etc. I consider the total loss in this fire reached the sum of \$75,000, inclusive of mature and younger forest growth.

The St. Maurice River basin experienced a veritable drought this spring, and it was only by supreme exertion on the part of the Protective Association that we were saved from serious conflagrations. I cannot speak too highly of the strenuous efforts made by Mr. Sorgius and his staff to ward off the danger, and must congratulate them warmly on the results achieved. General rain in this section only came about 15th to 20th June, whereas in other districts it arrived earlier.

Thus, taking into consideration the dangers which threatened us generally through the Province, and the comparatively small losses sustained, although the list of fires is large, I consider results to be eminently satisfactory. The staff has demonstrated its ability to cope with serious conditions successfully; we had an easy task, it is true in 1912, but quite the reverse in 1913, and were found equal to the occasion.

Railways Reducing the Risk

It is with much satisfaction that I can report great strides made in the way of better conditions this year on railways. In 1912, the Board of Railway Commissioners of Canada assumed control of forest protective work on all railways in the Province, except the I. C. R., and N. T. R., plus the provincially chartered roads, and issued order No. 16570, which detailed the plan of operation for protecting forests adjoining these railways. The Quebec Public Utilities Commission then took up the same line of conduct, as regards railways with Provincial charters and issued order No. 72, almost a duplicate of No. 16570.

The Quebec Public Utilities Commission saw fit to appoint me Provincial Fire Inspector early in 1913, with full powers to carry out order No. 72. The Board of Railway Commissioners also appointed me in the same capacity for railways under its control.

I had numerous conferences at Montreal and Ottawa with Mr. C. Leavitt, Chief Fire Inspector, and together we held conferences with all the railways, invariably meeting with hearty co-operation. My inspectors examined all the railways in the Province and located the dangerous sections, and special patrols were ordered on all these, after conferences held with the various roads interested.

The organization was completed in time for the season of danger, viz.: the disappearance of the snow, and my inspectors were in the field in time to cope with the situation. The Board of Railway Commis-

sioners kindly supplies passes to the staff, and assists us in every possible manner.

Thus, for the first time in the history of the Province, a regular system of protection has been established along lines of railways. The results from this first effort have been that, owing to the efficiency of the new organization, I have no serious fires to report as originating from railway lines controlled as above. Part of this successful result must be attributed to the excellent locomotive inspection carried on by the Board of Railway Commissioners, and which by special arrangement includes locomotives on all provincially chartered roads, except one or two which are remote and which happen to run through cultivated lands where there is no danger of fire occurring. Difficulties were met with e.g. proprietors of timbered lands, adjoining the rights of way, have been cutting, and the inevitable dangerous collection of debris and slash remains in some places. The Government has no authority to compel these owners to clean up the debris. It is unfair to the railways, they cannot enter on these lands and perform the necessary work. The Government wrote to a number of these people asking them to clean up; a very few complied with the request (all honor to them), others evaded the point, others completely ignored the correspondence of the Government, a fact which I desire to emphasize. Such being the case, I now beg to request the Honorable Minister to cause legislation to be enacted at the coming session which will enable the Government to compel owners of timbered lands adjoining railways to clean up their forest debris for a depth of 300 feet along their frontage. Railways are now compelled to maintain their rights of way free from debris, and are liable in damages for fire starting within 300 feet of the track; it is unfair to subject them to such conditions when owners of lands create veritable fire-traps right beside them. I urge this reform strongly.

The order in council imposing a \$5.00 penalty per square mile for non-patrolment of limits has had a good effect, and we have as a result many more rangers, and a very much increased safeguarding of the forests. Nevertheless, incredible as it may appear, there are still some limit-holders who are so careless of their interest as to decide that they will take the fire risk and pay the penalty. It was hard to convince some that the government was serious in this measure, but the majority acknowledge the necessity therefor, and made proper provision. In this connection I may say that the Province of Quebec Limit-holders Association rendered us signal service by strongly advising its members to comply with the requirements of the order-in-council.

The Value of Joint Protective Measures

I made mention of the St. Maurice Forest Protective Association, in my last report; eulogizing the system and principles of co-operative protection and complimented the Association on the work they had done. I also expressed the hope that limit-holders in other sections of the Province would follow the excellent example set and form other associations. I regret to say that now nearly a year has passed by and not another such association has been formed. What are our limit-holders thinking about? A joint drive on a large river is admitted to be more efficient and less costly than individual private organizations, the same thing applies to forest protection, the results are to be seen in the St. Maurice Valley. There is ample room for four or five such associations in this Province; for example, one is needed to cover the Gaspé Peninsula; another from the Matapédia Valley to the county of Bellechasse, on the South Shore, a third comprising the Saguenay and Gulf region, and at least two could be formed to comprise the Upper Ottawa District. Co-operative protection is just as feasible as co-operative driving of logs. The efficiency and thoroughness of co-operative protection being demonstrated, it is difficult to understand why further progress along these lines has not been made. The matter has been thoroughly gone into by the executive of the limit-holders association and strongly recommended by it. I hope sincerely that in a short time we will be able to report a different state of affairs and to point with pride to several organizations of this kind in our Province.

Judging by the reports received, I conclude that the ravages of the spruce bud-worm are decreasing, as professor Hewitt predicted. However, the forest tent-caterpillar has been very prominent; this pest has stripped the foliage from the deciduous growth, particularly on the South Shore, but he apparently has also firmly implanted himself north of the St. Lawrence as well.

The lookouts on the limits of John Fenderson & Company, and the Charlemagne and L. O. Lumber Company, operated satisfactorily; the James MacLaren Company has installed a telephone service far up the River du Lievre, which is a marked improvement, and advance; the River Ouelle Pulp Company operated their telephone system on their limits with the usual success. The St. Maurice Forest Protective Association, is arranging for six or seven lookouts, to be ready for next year.

The Pearl City Veneer Company, Jamestown, N.Y., report that they are finding business very good, considering the customary quietness at this time of year.

Retail Methods Contest Date Extended to Feb. 1st

Read the Particulars Below and Try for a Prize

Competition for Retailers

The date for receiving letters in the retail methods contest has been extended to February 1st, as the holiday season has prevented many, who would like to compete, from doing so. You now have four weeks more. A number of good letters have already been received.

Retail Lumbermen have plenty of yard and office troubles. Everyone has his own way of handling difficulties. Send us a letter about one of your own problems and the way you handle it. We are offering prizes for the best letters.

Fifteen dollars for the best.

Ten dollars for the next best.

Five dollars for the third best.

If you do not come among the first three, you may be among the next five, to each of whom we will give a year's subscription to the Canada Lumberman. If already a subscriber, you will be given credit for another year.

It won't be any trouble to write and you may get one of the prizes.

Others will benefit from your idea; you will get the benefit from all the ideas of all the others.

Any yard or office problem will do. Make your own choice and write soon. The contest will close on February 1st and the prize winners will be announced as soon as possible after that date.

If drawings are necessary to illustrate your idea, they may be included, or a rough sketch may be sent, from which we will prepare an illustration. Make the sketch plain and our artist will carry out your ideas.

Three experienced retail yard men will be the judges.

The contributions will be numbered in the order received and the names withheld until the judges have given their decision.

The Scientific Kiln Drying of Lumber

Before wood is suitable for use for most purposes it must be dried. Dry wood is in a unique condition, since wood in the living tree has never been dry from the time it was first formed. The operation of removing the moisture from wood does not consist of simply evaporating moisture. If evaporating moisture were all there were to the process, there would be no problem at all; it would simply be an engineering feat of supplying the necessary latent heat. Wood, however, is a complex substance and the removal of the moisture is accompanied by physical and mechanical changes. It shrinks and increases in strength and other changes take place.

It is a remarkable fact that less attention is given to the conditioning of wood for the purpose for which it is to be used than is given any other material. With iron and the metals greatest care and the most expert knowledge are used in their preparation. With wood, however, the total value of whose products exceeds that of every other substance except agricultural products, up to the present very little expert attention has been paid to the conditioning. The idea seems to have been that Nature will take care of her own and that the wood can be allowed to dry almost any way. When it is considered that the quality of the finished product is in part entirely dependent upon the process that has been used in drying, for any injury produced in the drying process can not subsequently be rectified, the importance of the subject of proper drying becomes evident.

Agriculture

Before discussing the drying of wood a brief description of its structure and composition will be of assistance. If you will think of a honeycomb it will perhaps give you a good idea of the way in which wood is constructed, except that the cells are very much longer in proportion to their width than in the honeycomb, and they are not as uniform. In the softwoods or conifers they are all pretty uniform in shape and size but in the hardwoods they vary greatly in the stick, some being fifty times as wide as others, the wide ones being termed vessels and the narrow ones wood fibres. Interspersed between these vertical cells and fibres are the medullary rays, appearing as the silver grain on quarter-sawed oak, and running in a horizontal radial direction. The Forest Service is making a detailed study of the microscopic structure of all the important American woods and has prepared photomicrographs showing the structure as it appears under the micro-

scope. These have not yet been published, but may be seen at the Madison laboratory.

Water exists in green wood in two forms: As liquid water contained in the cavities of the cells or pores, and as "imbibed" water intimately absorbed in the substance of which the wood is composed. Now it is almost axiomatic that removal of the free water from the holes or pores will have no effect upon the physical properties or shrinkage of the wood, but as soon as any of the "imbibed" moisture is removed from the cell walls shrinkage begins to take place and other changes occur. The strength also begins to increase at this time. This condition of moisture, which is the point when the cell walls or wood substance became saturated, is called the "fibre saturation point." It is a very significant point in the drying of wood. It is easy to remove the free water from woods which will stand a high temperature, as it is only necessary to heat the wood slightly above the boiling point in a closed vessel which will allow the escape of the steam as it is formed but will not allow dry air to come in contact with the wood, so that the surface will not become dried below its fibre saturation point. This can be accomplished with most of the softwoods, but not as a rule with the hardwoods, as they are injured by the temperature necessary. When it comes to evaporating the "imbibed" moisture, there is where the difficulty comes in, and also where the free water has to be removed through its gradual transfusion instead of boiling. As soon as the imbibed moisture begins to be extracted from any portion shrinkage begins and stresses are set up in the wood which tend to cause checking. The fibre saturation point lies between moisture condition of 25 to 30 per cent. of the dry weight of the wood, according to species.

The Wood Substance

In regard to the substance of which wood is composed: It may surprise you to learn, if you are not already familiar with the fact, that it is half as heavy again as water. If any wood could be compressed so that all the air spaces were got rid of it would sink in water like a stone. The specific gravity of the wood substance is 1.56. This substance is the product of living processes; that is, it is organic, and its structure is, therefore, very complex. It is thought to be built up of small particles closely laid together, the interstices being capable of filling up with moisture. The foundation part of this substance is known as cellulose. Cotton is almost pure cellulose, but in wood there is another material combined with the cellulose called lignin. This has never been isolated by itself, but is known only in combination with other

substances. Just how it is combined with the cellulose is not well known. It adds to the strength of the cell walls and gives them a darker color. The chemical composition of cellulose is the same as that of starch, to which it is closely allied, and is represented by the formula $C_6H_{10}O_5$, the hydrogen and oxygen being combined in the same proportion as in water. By the addition of water to the molecule sugar is formed, and closely related substances. Thus cellulose, starch, and sugars occur in the living tree.

The term sap is an ambiguous expression. The sap in the tree really descends through the bark and except in early spring is not in the wood of the tree except in the medullary rays and living tissues in the "sapwood." It contains sugars, soluble gums, and closely allied materials. What flows through the sapwood is chiefly water with a slight amount of mineral substances in solution. The water rises from the roots through the sapwood to the leaves, where it is converted into true "sap" which descends through the bark and feeds the living tissues between the bark and the wood, which tissues make the annual growth of the trunk. Just what is meant by getting rid of the "sap," as is often said, in drying wood is not clear, since the wood itself contains very little true sap and the heartwood none. The wood contains, however, mineral substances, organic acids, and volatile oils and gums, as resin and cedar oil, etc.

Objects of Drying Wood

These may be grouped under three main headings:

1. To reduce shipping weight.
2. To reduce the quantity necessary to carry in stock.
3. To prepare the wood for use and improve its qualities.

When the wood will stand the temperature, drying to reduce weight is most easily accomplished by heating the wood above the boiling point in a closed chamber but so arranged that the excess steam produced will escape. This process manifestly does not apply to hardwoods but is applicable to many of the soft woods. It is used especially in the Northwest, where inch Douglas fir is dried in from forty to sixty-five hours and sometimes in as short as twenty-four hours. In latter case superheated steam at 300 deg. F. was forced into the chamber but, of course, the lumber could not be heated thereby much above the boiling point so long as it contained any free water. The heat of evaporation may be supplied either by superheated steam or by steam pipes within the kiln itself.

The quantity of wood it is necessary to hold in stock is naturally reduced when either of the other two objects is attained and, therefore, need not be discussed here.

In drying to prepare for use and to improve quality careful and technical drying is called for. This applies more particularly to the hardwoods, although it may be required for softwoods also.

Present practice of kiln drying varies tremendously and there is no uniformity or standard method. Temperatures vary anywhere from 65 to 165 deg. F., or even higher, and inch stuff three to six months on the sticks is being dried in from four days to three weeks, and 3-inch stuff in from two to five months. Many kilns make a hit at superficial points and fall down on the fundamentals.

Classification of Methods of Drying and Types of Kilns

All methods in use at atmospheric pressure may be classified under the following headings. The kilns may be either progressive or compartment, and preliminary steaming may or may not accompany any one of these methods:

1. Dry air. Generally obsolete.
2. Moist air.
 - a. Ventilated.
 - b. Forced draft.
 - c. Condensing.
 - d. Humidity regulated.
 - e. Oven or boiling.
3. Superheated steam.

In some cases there is practically no loss, but more often it ranges from 1 to 3 per cent., and 7 to 10 in refractory woods such as gum. In some cases the losses are as high as 33 per cent. Air drying is by no means always to be preferred to kiln drying. In air drying there is little or no control over the process; it may take place too rapidly some days and too slowly others; it may be very nonuniform. Hardwoods in large sizes almost invariably check. By proper kiln drying these unfavorable circumstances may be eliminated. However, air drying is unquestionably to be preferred to bad kiln drying, and when there is any doubt in the case it is generally safer to trust to air drying. Green lumber can be better dried in the kiln if the fundamental principles are all taken care of.

Some of the advantages of kiln drying to be secured over air drying in addition to reduction of shipping weight and lessening quantity of stock are the following.

- Less material lost.
- Better quality of product.
- Prevention of sap stain.
- Fixation of gums and resins.
- Reduction of hygroscopicity.

Experiments have shown that drying oak and ash at 145 to 170 deg. F. has reduced the hygroscopicity 15 to 25 per cent. Specimens from the same sticks were both air dried and kiln dried, then placed side by side on a rack for over a year, and their moisture contents then determined. This reduction in moisture means a reduction in the "working" of the material which, even though slight, is of very great importance.

Fundamental Principles

1. The evaporation from the surface of a stick should not exceed the rate which the moisture transfuses from the interior to the surface.
2. Moisture tends to transfuse from the hot toward the cold portions.
3. Wood is soft and plastic while hot and moist and will become set in whatever shape it is in as it dries.
4. Shrinkage is greater the higher the temperature of drying while still moist.
5. Case-hardening and honeycombing result from the two foregoing circumstances. It may be explained thus: Suppose a block of wood is very wet and is placed in at too high a temperature and too low a humidity. The surface begins to dry and tends to shrink but is prevented from doing so by the wet interior. Being plastic, it yields to this resistance and becomes stretched. If not plastic it will check open. As drying proceeds it becomes hard and set in this expanded condition and acts as a strong shell. The interior now dries very slowly, does not become set but shrinks, and as the exterior is already hard it opens up into honeycombing. When the exterior once becomes set or "case-hardened" the interior is almost certain to become honeycombed, whether the drying takes place in the kiln or a long time afterward. The only remedy is to moisten the exterior by steaming or soaking before it is too late. Air-dried material frequently case-hardens and honeycombs as well as kiln dried. (Samples of sections of white oak felloes exhibited showing one badly honeycombed and the other excellently dried.)
6. Drying should take place uniformly at all points; otherwise stresses are set up in the wood.
7. Brittleness is produced by drying too far.
8. Dried wood absorbs or loses moisture in proportion to the relative humidity in the air.
9. The hygroscopicity and working are reduced by the thorough drying but not eliminated.

To properly utilize these principles in drying attention should be given to the following factors:

1. The lumber should be heated clear through before drying begins.
2. Humidity should be correct at the start and reduced in the proper ratio as the drying progresses.
3. The temperature of the lumber should be uniform and as high as the kind of material will endure.
4. The rate of drying should be controlled by the amount of humidity in the air and not by the rate of circulation. The circulation should be ample at all points to supply the heat needed for vaporization and to keep the humidity uniform. To evaporate one pound of water at atmospheric pressure requires the amount of heat given up by 669,000 cubic feet of dry air in falling one degree Fahrenheit. The regulation of the humidity is to prevent the surface from drying down to the point where it takes a "set" before the interior has dried to nearly the same amount, thus preventing casehardening. If dried too rapidly casehardening will result.
5. The degree of dryness obtained should conform with the use to which the wood is to be put.

Ideal drying depends upon:

- Ample circulation.
- Control of humidity at all times.
- Proper temperature.

Any kiln which fulfills these conditions should be capable of giving perfect drying.

Objection Taken to Increased Pulpwood Freight Rates

The International Paper Company and a number of other manufacturers of paper and lumber have filed a complaint with the Interstate Commerce Commission at Washington, D.C., against the advances recently made in freight rates on pulpwood from points in Eastern Canada, to the United States. The following typical increases are mentioned in the complaint:—

	Present rate	New rate
From Grand Piles, P.Q., to Mechanicsville, N.Y. ...	9c	11c
From Fillion P.Q., to Watertown, N.Y. ...	10½c	12c
From Point Levi, P.Q., to Ft. Edward, N.Y. ...	8c	9c
From Drummondville, P.Q., to Bellows Falls, Vt. ...	9c	9½c
From Point Levi, P.Q., to Watertown, N.Y. ...	9½c	10½c
From Quebec, P.Q., to Fulton, N.Y. ...	13½c	14½c

How Often Should Log Saws be Sharpened?

How many times during his experience with saws does the average mill man have some one approach him on the subject of how long a saw should be run on a single sharpening? There is usually a motive behind it all; sometimes it is a matter of dollars and cents, as in the case of the saw salesman. Again, it may be simply that he has noticed that some one is doing something a little different from his way and he tries to see if he can influence the other fellow to do what he is doing. This is done in a spirit of good-fellowship, which, as a matter of fact, is one of the true elements that enters into the trend of conversation when the subject of "saws" is approached.

It seems sometimes that some, at least, do not stop to think there is a wide latitude to be considered when specifying the exact length of time one sharpening will hold out. Logs taken from a pond where they have been in store for a long time, washing and rinsing the dirt and gravel out of the bark, are one of the easiest propositions a saw can be offered. Take those same logs and drag them through a half mile of cradle-knolls and quagmires, and if any filer can get the same results from a single sharpening, the title of "filer" is but little short of an insult to his skill; he must be a wizard. To say that two and one-half hours is as long as a saw will run in the clean, soft, water-soaked logs, is putting it in a wrong light, setting the time much too short. And to say that they should get good results for two and one-half hours in the latter logs, in nine cases out of ten would not prove right.

If the saw is put into logs of equal cleanliness, one of mountain spruce such as is found in New England, it will not last as long or make as long a run as it will in the pine that grows in the same locality, or even some of the hardwoods. Then not only is it a question of eliminating the sand and gravel, but the fiber of the wood, even the same timber grown on different soil, is of no little consequence. To stop and think for a moment of the 200 or 300 varieties of merchantable timber there is being sawn in North America alone, one cannot but see at a glance that there is too much to be expressed in a single sentence, and the time can't be pointed out with the two hands on the clock.

A saw in use, sawing pitchy lumber, like southern pine, will not run as long after it is beginning to get dull as it will in trees of deciduous growth, yet the actual strain on the saw in the cut is just the reverse of the practical interpretation of things at first glance. Here the real drawback is not so much in the condition of the cutting points as it is in the general condition of the saw. The pitch gathered on the sides of the teeth gives them a tendency to vibrate, and as a consequence the teeth are more likely to make washboards than if they were clean. A half-dull tooth will cut crooked lines oftener, when loaded with pitch, than a very dull tooth will in the same kind of lumber if it is clean. The saw trying to cut with vibrating teeth, in soft stock, is subjected to vastly more strain than it would be if sawing the hardest kind of timber with clean, steady teeth.

To get away from the logs and consider the stunts that saws have to do to lumber from a drykiln, or boards, which have been stacked alongside of some dusty road, near some sand bank or near a railroad track, if one is trying to give advice that cannot be refuted, is a subject that should not be broached excepting in low tones. If any one can tell how much longer a thin resaw will run in sand than it will in coal clinkers (make a statement that will prove out every time), his advice would be of value in one's store of knowledge when trying to determine how much he has to "hurry up" to get the next saw ready on time. And incidentally he might have "second sight" equal to the task of instructing some of us how to not break so many of the ten commandments every time our saws get busy on that sort of material. It is obvious that some conclusion must soon be reached, when the saw is put in contact with a lot of foreign substances in the lumber, and that it must necessarily be a dull saw in a very short time. Eliminate all foreign substances and the results are the extreme opposite, a fairly sharp saw after a long run.

Another thing that is of necessity a matter to be considered is, the quality of work required of the saws. In some places the resaw capacity is hardly equal to the amount of sawing that has to be done to keep things going with a steady move, and it must be pushed hard, with little regard to the quality of output. Then, of course, a saw will not run as long on a wide-open feed as it would on a medium feed. Where mills are equipped with plenty of resaw capacity, that is usually the place where the quality of work comes ahead of quantity every time. When such a plant is located, it will be readily seen that output is just as profitable to the owner as in the place where they sacrifice quality for the sake of speed.

A band saw is as treacherous a thing, when you approach a point nearing its capacity, as anything one can imagine. It may be working fine on a 60-ft. feed, but push it up to a 70-ft. feed and it will begin to lie down. The result is usually an inferior quality of work, much more than offsetting the gain in quantity. Do what you will, a saw cannot be rushed beyond what it is put up for, and do good

work. Neither can the saw be underfed and get good results for any length of time. Either will soon get the best fitted saws to working badly. Just try a guess on this matter, and you will find that the length of the run at one sharpening will vary to the extent of hours, if the lumber is nothing but clean stock—no bark, sand, gravel or nails.

Here is my opinion, gained from actual experience: A single band, properly fitted, will stand a reasonable feed and run out from 50,000 to 65,000 feet of lumber, barring about three of the hardest grades, on a single sharpening. A twin band will do about 90,000 to 100,000 feet on a single sharpening under the same conditions. If they fall very much short of this there are some faulty conditions, either in the machine or the fitting. And a saw that will not complete the above-stipulated run in one and one-half days is not being operated in close keeping with the times. This is considered on the basis of 1-in. stock, resawed once.

You can sometimes guess at things and feel you are all to the good, but later on find if you had guessed differently you would have been nearer to the real facts. The man who believes two and one-half hours to be the limit on any feed, in any kind of stock, that a saw should be run on a single sharpening, has as good right to his opinion as any one, but fifteen or sixteen years of saw-fitting has never proved it to my satisfaction. A very good practice, in my opinion, is to pick out for a sawyer a man with good eyes and ears, give him well-fitted saws, and tell him to run them as long as they run straight and feed them as fast as they will do the work properly. Tell him to take the saw off when it does not go straight, and insist upon his doing so, no matter if it has been at work two hours or two days. In a properly arranged factory it is only ten minutes' work to change, and in a properly arranged log saw mill fifteen minutes is sufficient time. Then, if this time cannot be made up in the following two hours, it is evident that the change was not necessary. If you tie yourself to a limit of hours, and keep close record, many changes will soon be recorded which were not necessary.—B. R. L. in *The Woodworker* Indianapolis.

Brush Disposal

An interesting discussion of the brush disposal problem in connection with lumbering operations, with a view to the prevention of forest fires, is contained in a recent book entitled "Forest Protection in Canada," published by the Commission of Conservation and written by Mr. Clyde Leavitt. In the course of the article, Mr. Leavitt writes in part as follows:—The large areas of inflammable material following old-style lumbering operations are almost certain to catch fire sooner or later. As a matter of fact, most of the serious fires have started in slashings. Control of such fires in dry seasons is almost impossible, and the loss of life and property has been enormous.

In addition to the destruction of merchantable timber on adjacent lands, the second crop on the cut-over lands is, in case of a forest of mixed age-classes, retarded by fire for at least fifty to one hundred years, through the destruction of the young growth under merchantable size. This of course does not apply to a forest where the trees are practically all of merchantable size, especially where fire, following cutting, facilitates reproduction as is true of Douglas fir on the Pacific Coast and of western white pine in the interior.

Situation in Canada

In contrast to the short-sighted policy which so long prevailed in the United States, the Dominion and Provincial Governments of Canada have wisely retained the ownership of non-agricultural lands to a very large extent, disposing for the most part only of the right to cut timber under specified conditions. Thus, the necessity for voluntary action through the formation of lumbermen's associations is not nearly so urgent as in the United States. With the exception of the relatively small percentage of timber land in private ownership, the situation is, in the long run, within the control of the Dominion and Provincial Governments, in connection with the issuance of new licenses and renewals of those previously issued. In some cases, all that is needed is the enforcement of provisions already included within licenses. This is particularly true of those issued by the Dominion Government, where ample provision is made on paper for brush disposal but where these provisions have not been enforced. This continued lack of enforcement has resulted in what is doubtless regarded by many of the licensees as a sort of vested right, which it will no doubt be difficult to overcome.

Brush Disposal Necessary

While patrols, the use of spark arresters, care with camp-fires, and similar measures are, and will continue to be, necessary, the root of the problem so far as the slashing menace is concerned, can best be reached through the adoption of measures for the disposal of debris from woods operations, in sections where the fire danger is extreme. It must be recognized that conditions vary widely, and that measures to be taken must be justified by the intensity of the fire

danger, and must also be practicable from a business point of view.

In the past, when stumpage values were low, and the margin of profit small, owing to large supplies and keen competition for the market, intensive methods could not be practised. Now, however, timber values are becoming sufficiently high to justify the owner in spending money to protect his remaining timber from fire, and, to a certain extent, in protecting the young growth for the sake of later cuttings. This is particularly true in the pulpwood sections, where repeated operations are practicable within reasonable limits of time. This consideration, however, should appeal with especial force to the Provincial and Dominion Governments in Canada, which, fortunately, still retain to a very large extent the ownership of immense areas of non-agricultural lands which are suitable only for the production of timber. Governments can best afford to hold lands for forest production, on account of the long time element involved and thus are particularly interested in maintaining the forest productive capacity of their non-agricultural lands. The question of fire-protection and thus of brush disposal should appeal to government agencies with especial force.

Disposal of Conifers and Hardwoods

Brush disposal as a fire-preventive measure is generally considered at the present time only in connection with coniferous or so-called evergreen species,—the spruces, firs, pines, hemlock, etc.—as contrasted with the so-called hardwoods or broad-leaved species, such as the maples, beech, birch, etc. Coniferous species are found almost exclusively in the West. In the northeastern United States and Eastern Canada the principal species being cut on a large scale are also conifers. The hardwoods rot much more quickly than do the conifers, so that the debris disappears by decay in a much shorter time. Further, the danger of fire in a hardwood slashing is in no way comparable at any time to the danger in a coniferous slashing. It should also be borne in mind that in a hardwood forest, the fire danger is due to the leaf litter rather than to the tops, though the tops may increase the severity of a fire once it is started.

Lopping the tops in hardwoods will not minimize the danger of a leaf fire, although it may possibly do so if the trees are cut in full leaf in the late summer or early fall. If such a leaf fire gets started in hardwoods it is in any event almost certain to kill any reproduction in its way. A further point is the fact that under present conditions the stumpage values of hardwood species are generally too low to justify the extra expenditure that would be involved in any plan of brush disposal. Many large areas of hardwoods can not be operated even now, without any expense of this kind, and undoubtedly the imposition of such a requirement would not only delay the day when such tracts can be operated, but would convert into a loss, or at least very materially reduce, the profits on hardwood operations which are now being carried on in portions of the eastern United States and Canada. Where cordwood is taken out as a part of the hardwood operation, the need for considering brush disposal is very greatly reduced, entirely aside from the financial consideration.

Methods of Disposal

So far as possible, brush disposal should keep pace with logging. Deep snow may, however, make this impracticable. In case of summer operations, where there is danger of fire spreading, the brush should be piled as the operation proceeds, leaving the burning to be done at a safe time later, as after a rain or a light fall of snow.

Under some conditions, sufficient protection from fire may be secured by the burning of brush so as to form broad fire lines, particularly along railways or wagon roads, laid out in such manner as to do the least injury to young growth. The necessity for general burning is decreased if an efficient system of patrol is provided.

There are four general methods of brush disposal, which are more or less closely related. These are: (1) Burning; (2) Lopping; (3) Lopping and piling; (4) Lopping and scattering.

Burning may be either broadcast, or following lopping and piling. In the coast type of the Pacific northwest, broadcast burning has been found most practicable under certain conditions. This applies to sections where the stand is very heavy and the trees are practically all mature, so that the operation amounts to a clear-cutting, with practically no young growth left worth the extra cost of protection. The slash is left scattered as in old-style lumbering operations and is often four to five feet deep all over the ground. An efficient fire line is made around the slashing by the removal of all inflammable material on a wide strip. The tract is then burned off, but in order to ensure a clean burn and at the same time avoid danger of the fire spreading beyond control, and into green timber, it is necessary to employ men thoroughly experienced in this line of work, and great care must be used in selecting the time for burning. This procedure results in exposing the mineral soil, thus facilitating the reproduction of Douglas fir, which species is considered of superior desirability. Broadcast burning can be done at a much lower cost than piling and burning. It is reported that under favorable conditions this work can be

done for as little as 25 cents per acre. Probably, however, in most cases, it will cost from 5 to 10 cents for each thousand feet of timber cut.

Piling and burning are indicated for sections where the cutting is not clean and where, as a result, the remaining young growth of mature or semi-mature timber must be protected and the fire danger is so great as to require the elimination of the slash menace. This method is very frequently adopted in connection with timber sales by the United States Forest Service in the Western States. It must, however, be regarded primarily as a fire-protective measure, and where cutting is done in the winter, as in parts of Minnesota and the Rocky Mountain region of the United States, it has been found entirely practicable to burn the brush as the operation proceeds. The added cost of piling and burning is in part offset by the greater ease of skidding.

Lopping

The disadvantages of burning brush will, under some conditions, outweigh the advantages, thus rendering some other form of brush disposal desirable. For instance, in the Adirondacks, the burning of brush is considered impracticable, partly on account of cost and partly on account of the great danger of soil fires, with resultant loss of young and old growth.

The whole theory of lopping brush is that by this means the debris is brought into much closer contact with the ground, so that it will absorb moisture more readily, dry out less in summer, and decay more rapidly than when propped high above the ground. If the work is properly done, brush handled in this way largely ceases to be a fire menace in a very few years, and will practically disappear by decay in from one-third to one-half the time required for brush supported off the ground, as are unlopped tops under ordinary conditions. Following the lopping operation, piling or scattering is usually advisable, unless the added cost renders this impracticable.

The article concludes with a consideration of the methods of "lopping and piling" and "lopping and scattering," each of which is adapted to different localities and circumstances. Much interesting information is also included regarding brush disposal methods in various national forests in the United States.

Mr. Hall Kelly has introduced into the Quebec Legislature two amending bills dealing with the expropriation of land required for the transmission of water for pulp and power mills and the laying of pipes under private land. At present lands expropriated cannot be occupied until the money is paid over but Mr. Kelly proposes under one bill that companies shall be allowed to deposit the money in court and use the land, and thus prevent development from being retarded. The other bill, relating to pipes under private lands, is designed to overcome objections sometimes met with in cases where water has to be brought to mills. The bill enables pipes to be laid under private property subject to the payment of damages.

Panama Canal's Effect Upon B. C. Trade

Col. A. D. McRae, of the Canadian Western Lumber Company, in a recent interview spoke of the effect of the Panama Canal upon the lumber trade and upon trade in general. In regard to the general effect he expressed the opinion that the benefit would only make itself felt slowly. Trade routes were built up gradually. He believed that it would be five to fifteen years before the west would fully feel the advantage of the opening of the canal. Speaking of the effect upon the lumber trade, he said that he expected it to be more marked. The Southern States, for example, had been selling four million feet of lumber per year, largely short lengths, to the West Indies. With the opening of the canal, Western Canada would be able, on account of advantageous freight, to take a large percentage of this business. This was a class of lumber also which was rather scarce in the Southern States, but abundant in Western Canada. A large parcel-business in lumber would also be worked up with Europe. A decrease from \$5 to \$7 per thousand feet of freight rates would mean that many European buyers would be able to buy small amounts of lumber in markets where formerly they had only been able to buy by ship loads. This should mean a large increase in the total trade of Western Canada. Col. McRae also thought it probable that the removal of duty upon lumber entering the United States would have a good effect upon the Canadian industry. He would not be surprised if the Canadian Western Lumber Company operated its mills on night shifts again next year, on account of this additional demand.

A recent cable from London says: At the annual meeting of the British Wood Pulp Association Dr. Pelletier, the Agent-General for Quebec, warned the British papermakers that American capitalists were trying to locate the best timber limits and the greatest water-power in Canada, and that it would not be long before the Americans would be in possession of a large share of the Dominion's pulpwood.

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Birch Logs, 16-in. and up in diameter. Clear for veneer purposes. Robbins Veneer and Lumber Co., Buffalo, N.Y. 1

Wanted to Buy

We are in the market for the following: 1,000 35-ft. and up Cedar Poles. Odd lots of Spruce and Pine. Square Timber. State best prices net cash. Delivery coming season. Apply P. O. Box No. 1595, Montreal, Que. C

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

1 x 1 x 42.
1 x 1 x 48.
1 x 1½ x 42.
1 x 1½ x 48.
1 x 1¾ x 42.
1 x 1¾ x 48.

Require Thickness, 1/16-in. Plump.

Quality—Free from all defects.

Can take delivery of green or dry stock.

Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc. 24-1-TF

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Wanted

1-in. and 2-in. Spruce and Hemlock for spring or summer delivery; will make an advance on stock.

A. N. DUDLEY.

109 Stair Building,

Toronto, Ont.

1-2

For Sale-Lumber

For Sale

One thousand cords dry softwood slabs and edgings. Canada Pine Lumber Company, Limited, Hamilton, Ont. 24-1-2-3

For Sale

Peeled cedar post 4½-in. to 7-in. top, 8 ft. long. Best of quality and made from green cedar. Chas. Pedwell, Lions Head, Ont. 9-t.f.

For Sale

About 200 M. ft. of Hardwood logs from 9-in. to 13-in. in diameter. F.O.B. cars, Sherbrooke.

Apply E. L. DANCHE, Ascot Corner, P.Q. 1-4

For Sale

8/4 Soft Elm.
4/4 Soft Maple.
4/4 Soft Elm.

In car lots only. The above is well manufactured and bone dry. Apply Box 925, Canada Lumberman, Toronto, Ont. 1-2

Lumber For Sale

6 cars Square Cedar, 7 x 7 and up. 100,000 ft. 3 x 7 and 3 x 8 Merch. Spruce. 1,000 Spruce Piles, 20 ft. to 35 ft. 90,000 ft. 3 x 3 Merchantable Spruce. 5 cars 2 x 4 Merchantable Spruce.

GEO. C. GOODFELLOW, Montreal, Que. C

For Sale

F. O. B. Barry's Bay.

180 M. Ft. 2" Dry Hemlock.

30 M. Ft. 2" Dry Spruce.

2" x 4", 2" x 6", 2" x 10", and 1" boards.

For January Delivery.

Apply Robert Bury & Co., 79 Spadina Ave., Toronto. 1

Dry Country Stock January

Delivery,—

80 M. Ft. 1" Basswood, No. 1 C. & B.
50 M. Ft. 1" B. Ash, No. 2 C. & B.
50 M. Ft. 1" Soft Elm, No. 1 C. & B.
25 M. Ft. 2" Soft Elm, No. 1 C. & B.
25 M. Ft. 2" Birch, No. 1 C. & B.
12 M. Ft. 2" Oak, No. 1 C. & B.

Robert Bury & Co.,

79 Spadina Ave., Toronto. 1

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,

Timber Department,

1-t.f. Janesville, Wisconsin.

For Sale

100 M. 1 x 4 White Pine Mill Culls.
100 M. 1 x 6 White Pine Mill Culls.
100 M. 1 x 8 White Pine Mill Culls.
100 M. 2 x 6 & up White Pine Mill Culls.
100 M. 2-in. Hemlock Mill Culls.
100 M. 2 x 10 - 14 ft. to 20 ft. Norway.
100 M. 1 x 10 White Pine Dressing.
50 M. 2-in. Cuts and Better.
60 M. 3-in. Deal Good.

F. McGIBBON & SONS,

Sarnia, Ont. 1

For Sale

260 M. ft. 5/4 No. 1 C. & B. Basswood.
40 M. ft. 6/4 No. 1 C. & B. Basswood.
2,500 ft. 8/4 No. 1 C. & B. Basswood.
2,300 ft. 16/4 No. 1 C. & B. Basswood.
10 M. ft. 4/4 No. 1 C. & B. Basswood.

J. AUSTIN & SONS,

Kinmount, Ont. 23-24-1-2

Wanted-Machinery

WANTED—One pair twin circulars, for slabbing logs down to 4 inches and up. Must be in good condition. Apply 524 Board of Trade Bldg., Montreal. 23-t.f.

WANTED—One pair steam engines, capable of developing 500 h.p. for sawmill. Must be in good condition. Apply 524 Board of Trade Building, Montreal. 24-t.f.

For Sale-Machinery

Wickes Gang

A first-class machine at a bargain. 23-24-1-2 W. L. MILES, Saginaw, Mich.

ENGINE FOR SALE

Second-hand 12 x 30 Wheelock Engine made by Goldie & McCullough, Galt. In good condition, low price, can be seen at our works.

Canada Printing Ink Company, Limited, Toronto, Ont. 1

Woodworking Machinery for Sale.—3 26-in. revolving bed, double surface planers; 3 24-in. Champion planers, matchers and moulders; 1 MacGregor-Gourlay power feed rip saw; 1 42-in. Fay power feed band rip saw; 2 No. 619 Canada Machinery Corporation dimension saws; 1 54-in. Jackson-Cochrane band resaw; 6 30-in. Ideal pedestal band saws; H. W. Petrie, Limited, Toronto, Montreal and Vancouver. C

For Sale

1—Giddings & Lewis Horizontal Slab Re-saw.
1—Pair twin slabbers for ties.
1—Payette Box Board Edger.
1—Engine, 12 x 20, complete.
28—Wrought iron dry kiln trucks.
All in working order.

FIRSTBROOK BROS.,

24-1-2-3. Penetang, Ont.

For Sale at a Bargain

1 10 in. x 10 in. Simplex Pump.
5 Steam Engines.
1 Killam Stock Gang (New).
1 Mitts & Merrill Hog, No. 20, 10 in. x 12 in.
1 Ricker with 30-in. Saw.
1 St. John Iron Works Driving Gear for Band Saw Carriage.
Edger, Planers, Shingle Machine, Chain Blocks, Trolleys, Saw Arbors, Pulleys, Rotary Saws, and a large lot of Steam and Mill Fittings.

Address, T. N. McGRATH,

20-t.f. Tusket, N.S.

Wanted-Employment

Advertisements under this heading one-cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted as single or double band sawyer. Good references. Apply Box 928, Canada Lumberman, Toronto. 1-2

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

Salesman Wanted—Large Southern yellow pine manufacturers want a good Canadian salesman to travel Canada. Must know yellow pine trade. Good salary. Apply in first instance to E. J. Macintyre, 659 Peoples Gas Building, Chicago. 1-2-3

Business Chances

For Sale—Planing Mill

A going concern. Consisting of lands, buildings and machinery in good live town, Waterloo County. A. C. Bender, Real Estate, Berlin, Ont. 23-24-1-2

Bargain if taken before January 15th. Tug Marie Louise, length 65 feet, beam 15 ft., 50 h.p., steam 200 pounds. Hull rebuilt 1911-12, fully equipped, electric lighted, cookery outfit, sleeping accommodation for 7 men. Also two scows.

The Baker Lumber Company, Ltd., Lindsay, Ont. 23-24-1-2

For Sale

Lumber Limits in Eastern Canada, 50,000 acres, large Sawmill, fully equipped going concern, on salt water. Correspondence solicited. Will be sold right to close estate.

Address, Timber Limits, care Canada Lumberman, Toronto. 22-t.f.

Wanted to Buy

one or two lumber yards each doing a yearly business around \$30,000. Would like to trade some farms in on the deal. Apply to K. T., c/o Canada Lumberman, Toronto. 24-1-2-3

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. tf

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Saw Mill For Sale or Lease

What is known as the "Picnic Island Mill" at Little Current. Cutting capacity 140 M. inch lumber in 10 hours. In first class condition.

Possession can be given 1st January next. For further particulars apply to

THOMAS CONLON,

44 Church Street,

St. Catharines, Ont. 21-t.f.

For Sale

Timber on 25 acres; red oak, white oak, other hardwoods and pine.

HERBERT DAVIDSON,
Mount Nemo, Halton, Ont.

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

Sale by Auction of Valuable Timber Limits

Public Notice is hereby given that on Thursday, January 15th, 1914, at ten o'clock a.m., the timber limits hereinafter mentioned will be offered for sale by public auction at our offices.

License No. 110 Callieres South 17 square miles.

License No. 110 Callieres North 28½ square miles

with saw mill equipped with machinery and 132 acres, more or less, freehold land at Port aux Quilles, St. Simeon Charlevoix County.

Conditions of sale: Ten per centum cash on adjudication, the balance payable upon transfer of the licenses, which transfers will have to be payable to the Crown Lands Department of the Province of Quebec by the purchaser, who will also pay the auction duty and will have to accept the licenses and property with any responsibility on the part of the vendor save that the licenses have been issued and are his property and to furnish titles to the freehold property, mills and machinery.

For inspection of the licenses and other particulars apply to

LARUE & TRUDEL,
Accountants,

24-1 Dominion Building,
126 St. Peter Street, Quebec.

Saw Mill Property For Sale or Rent

The following are some of its leading features: Situated near Little Current, on the Georgian Bay, on what is known as Picnic Island. Contains 37 acres of freehold property which includes the mill and more than twenty other buildings. It has been leased by the Wolverine Lumber Company during the past seven years, and their lease expires the first of January next. If they buy more limits they may likely continue the lease. In the meantime we are offering the property for sale or rent. The mill has been cutting about 20,000,000 a year on small logs and a ten-hour day. The Island is in unorganized territory and our yearly tax on it is only one cent an acre in addition to the Little Current school tax of about twenty-five dollars a year. The power consists of two engines—a 24 x 30-inch and a 20 x 20-inch cylinder. Five boilers 60-inch diameter by 16 feet long. A double cutting band, a wickes gang (36-inch) and a circular saw. Two trimmers, two edgers and good lath mill capacity. The protection against fire is probably the best on the Georgian Bay; with a fine large pump in the machine shop, and a water tank outside ninety feet high with water pipes leading to the mill and all the houses on the Island, four streams at once can be thrown on the mill. We carry \$82,000 insurance on the mill and on all the buildings, the average rate being less than four per cent. Our piling capacity consists of 2,200 feet of stone-filled docks holding about ten-million feet, and ten million more in the rear on the ground. Vessels can load at the docks to sixteen-foot drafts and be well sheltered. First-class booming room for about 15,000,000 feet of logs, 650 booms and chains. We carry boiler insurance, and the inspectors' report this year testifies that everything is in good condition. The average loss of time during the past six years is probably less than three days in the season for repairs, and the quality of the manufacture is among the very best on the Georgian Bay. To build up this property at the present time would cost at the least \$200,000, but we do not care to go back to the active work of running it, and will sell the property free of encumbrance for \$75,000 and on easy terms of payment. There is now a railroad running into Little Current which will materially increase the value of this property. If we do not sell soon, would lease it for a term of years at a reasonable rent, and will be pleased to correspond with interested parties. For further particulars apply to the undersigned.

Thos. Conlon,

44 Church Street,
St. Catharines, Ont.

24-1-2-3

For Sale by Tender

Tenders will be received by the undersigned up to twelve o'clock noon on

Wednesday the 18th March, 1914
for the purchase of the following assets of the

Northern Islands Pulpwood Company, Limited Port Arthur, Ontario

Parcel 1.

Real estate, being lots 1, 2, 3, 4 and 5 of Subdivision of Park Lot 2, North John Street, City of Port Arthur, Ontario, 133 ft. by 131 ft., more or less, on Johnson Avenue, valued at \$12,000.00.

Parcel 2.

Pulpwood lands in Lyon Township, District of Thunder Bay;

	Acres
Lot A-19 locations, having an area of approximately	2,901.92
Lot B-12 locations, having an area of approximately	1,709.50
Lot C-57 locations, having an area of approximately	9,310.02
	13,921.44

Estimated to contain 125,000 cords of wood. Buildings and erections thereon valued at

River and road expenditures	\$ 7,050.00
Sawmill, Lot B. 94 by 20, valued at	14,056.00
Machinery and Equipment, valued at	5,184.55
Camp Equipment, as per Inventory	22,747.81
Horses	11,459.74
	3,860.00

Parcel 3.

Equities and Rights of the Company in certain Licenses, permitting, under terms, cutting of pulpwood on Lands known as Nipigon Mining Lands in District of Thunder Bay, as per list having an approximate area of 63,863 acres.

Parcel 4.**(A)**

Equities and rights of the Company in certain licenses, permitting under terms, cutting of pulpwood on Lands known as the Whalen Lands, in Lyon Township, District of Thunder Bay, as per list, having an approximate area of 1,132½ acres.

(B)

Equities and rights of the Company in certain licenses, permitting under terms, cutting of pulpwood on Lands known as the Squaw Creek Lands, in Lyon Township, District of Thunder Bay, as per list, having an approximate area of 2,084½ acres.

Parcel 5.

Equities and rights of the company in certain licenses, permitting under terms, cutting of pulpwood on Lands known as Magnet Point Lands in Black Bay of Lake Superior to be located under Veteran Scrip, as per list, having an area approximately of 5,120 acres.

Parcel 6.

Equity in agreement to purchase Black Sturgeon Lands, having an area of 8,000 acres, against which there is a debt of \$52,000.00.

Parcel 7.

Camp Supplies, as per Inventory... 6,058.26

Parcel 8.

Pulpwood and Piling, as per Inventory ... 2,400.00

Parcel 9.

Launches, Motor Boats, Boom Sticks and Chains, as per Inventory ... 10,972.35

Tenders will be received for the nine parcels en bloc and tenderers are required to state amount apportioned by them to each parcel.

Tenders will also be received for the parcels separately, and in case the whole property can be sold more satisfactorily in parcels, such tenders may be accepted.

Inventories may be seen on application to the Assignee.

TERMS OF SALE

One-fourth cash, ten per cent. at time of sale, and balance in two, four and six months thereafter, with interest at six per cent. satisfactorily secured. Marked cheque payable to the order of G. T. Clarkson, Assignee, for ten per cent. of amount of tender must accompany each tender, which cheque will be returned if the tender be not accepted.

The highest or any tender not necessarily accepted. As to Parcel 1, the purchaser shall search the title at his own expense and the vendors shall not be required to furnish any abstracts, deeds, or other evidence of title, except those in his possession. The purchaser shall have ten days in which to make objections or requisitions, which, if the vendor shall from any cause be unable or unwilling to answer, the vendor may then rescind the sale, in which case the purchaser shall be entitled only to a return of the deposit money, without interest, costs or compensation.

As to Parcel 2, lots are sold without guarantee as to title, quantity of lands, or estimates of timber thereon, and purchaser must accept title of the Assignee as it stands.

As to Parcels 3, 4, 5 and 6, the purchaser will be required to accept such equities and rights as are vested in the Assignee, full particulars of which will be furnished on application.

As to Parcels 8 and 9, these parcels are offered subject to prior sale.

For any of the Parcels, 7, 8 or 9, tenders must be for the whole amount of the parcel. Should there be any shortage, the same will be adjusted on the basis of shorts and longs, having regard to inventory prices, as compared with the combined value of the items in each parcel, as stated on this advertisement.

Tenders will be opened at the office of the Assignee, 33 Scott Street, Toronto, at ten o'clock in the forenoon of Thursday, the 19th day of March, 1914, when all tenderers are requested to be present.

Further particulars may be obtained on application to the Assignee.

Dated at Toronto this 4th day of December, 1913.

G. T. CLARKSON, Assignee,
15 Wellington Street, Toronto.

Miscellaneous

Boiler Tubes for Sale—We have on hand a quantity of 3-inch second-hand Boiler Tubes taken from a 14-foot boiler. Will sell cheap, Stevens-Hepner Company, Limited, Port Elgin, Ontario. 1

For Sale

Tugboat, 65 ft. over all, 14 ft. 3 in. beam, 8 ft. deep, fully equipped with winches, 10 and 20-in. compound engines, surface condensers and pumps. All connections and pipes brass and copper. Address T. N. McGrath, Tusket, N.S. 20-t.f.

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

from eight to a dozen, arrive at Cornwall from the back country where they spent the summer in idleness. The hickory billets are turned over to them, and they begin their winter work of whittling lacrosse sticks. By the time the warm days of spring call the children of the wilderness back to the wild, they have reduced the hickory to the finished product, and they depart for the frontiers, leaving others to put the sticks on the market and collect the cash from the sales.

The manufacture of pulp wood in Canada is on an increasing scale, according to the report recently issued by the Canadian Forestry Department, and although the forty-eight pulp wood mills reported in 1912 to have manufactured pulp wood to the value of five million two hundred and fifteen thousand five hundred and eighty-two dollars, the quantity consumed showed an increase of over twenty-eight per cent., and six million five hundred and twenty-four thousand dollars worth of pulp was imported.

Johnson, Welch & Company

CHARTERED ACCOUNTANTS.
TRUSTEES—FINANCIAL AGENTS.

CROWN LIFE BUILDING,
JAS. F. LAWSON, HENRY J. WELCH, TORONTO. CABLE ADDRESS: "LAWELCO" A. B. C. & WESTERN UNION.




FORESTRY DEPARTMENT

Montreal Engineering Co. Ltd.

164 St. James St., Montreal

Organized to carry on timber limit cruising, forestry surveys and to advise technically and commercially on timber limit purchases and sales.

Staff composed of men with years of training in the Canadian woods.



PEAVIES

Cant Hooks, Boom Chains, Timber Dogs

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario is undoubtedly quieter than is usual at this time of year, yet there is general feeling that business will improve early in the new year, after a little longer rest. Yards are ordering very carefully, for immediate requirements only, speculative buying being absent entirely. Payments are being made with fair regularity though they are a little slow in a few cases. The general trade situation appears to be a little slower than usual but fairly healthy.

Spruce continues strong on account of eastern manufacturers having a good outlet in the Eastern States since the removal of the duty. Mill run spruce is now selling at \$16 to \$18, whereas, before the duty into the States was removed, it could be had at \$15 to \$16. Hemlock continues scarce. Pine has not been able to stiffen up like hemlock, as southern pine and spruce have been strong competitors. Lumber stocks in Ontario are low and favor strong prices. An improvement in the financial situation would soon be reflected in stiffer prices generally. Lath are almost out of the market and are in good demand. The shingle market is quiet.

The hardwood market is quiet, though some wholesalers report quite a good trade. Those who are doing well, however, are the active ones who get out and hunt for the business vigorously. It would not be correct to say that business is much quieter than usual at this time of year, which is always quiet. Reports from Montreal state that the export trade in birch is very quiet. Local Ontario and United States trade is fair. Collections are encouraging and indicate that the trade is ready for improvement as soon as it comes.

Ottawa Valley operators report that little or no snow has fallen in the eastern and northern sections. A heavy fall of snow, followed by a period of severe frost is required unless the cut is to be reduced, even as compared with last year. Prices at Ottawa are unchanged and local trade conditions are quiet.

Eastern Canada

The lumber trade at Montreal continues on a moderate scale and reports from various wholesalers are rather contradictory, some telling of good trade and some of poor. Stocks in general are low, particularly dry lumber in the common grades. There is a fair demand for lath, but stocks are light. Present indications are that wholesalers will show larger operations during 1913 than during 1912 and it is thought that similar reports will come from the retailers. Easier money during 1914 would undoubtedly place the demand for lumber upon something like its former basis. The demand for dimension timber is quiet and prices are low.

All the mills at St. John, N.B., with the exception of those of Stetson, Cutler & Company and Randolph and Baker, had finished their operations before Christmas. This and the holiday season combined to put trade upon the customary quiet basis which usually continues until the middle of March, when the mills again start running. Practically all the English deals are now in the hands of the principal shippers. Latest reports from Great Britain are to the effect that trade is fairly good, although there is much anxiety about the labor situation. English deals are steady at about \$16.50 to \$17.00 per M. for city cut. Present indications are that the cut of the rotary portables will be lighter this winter. Owners of American stocks are holding for better prices later on. The base price for schedules is about \$25. Lath are steady, the New York price being about \$4. Stocks of lath for sale are scarce. Logging conditions are still poor, as cold weather only commenced about the 20th of December. Operators expect the New Brunswick cut of logs to be less than last year.

Enquiry for eastern spruce at Boston has been somewhat better during the past fortnight, although, as a result of the slow and dragging trade of the past month or more, prices are being quoted in some cases, lower than they were in the early fall. The improvement of the past fortnight is probably due to the long spell of warm weather. Summer spruce mills, manufacturing dimensions, which have been shipping green lumber, are shut down and on account of the absence of snow, winter mills had not started up at the end of the year. Temporarily, therefore, there was a scarcity of spruce, which was reflected in the price of dimension. 10 in. and 12 in. are about 50c. higher at \$28 and 9 in. and under are selling at about \$26. This advance is expected to be only temporary and is usual at this time of year, whenever the snow is late in arriving. Southern pine and north Carolina pine, in the low grades, have been selling very cheaply in Boston and are weak. The demand for shingles is also dull.

Price quotations show an easing off in white pine uppers and se-

lects, 1 in. to 2 in., and in fine common white pine, 1 in. to 2 in., which range from \$1 to \$2, a similar reduction is shown in the place of barn boards, Nos. 1, 2 and 3, 1 x 12. Canadian spruce boards are also about \$1 easier. Lath are 10c. lower for 1½ in. spruce at \$3.90. New Brunswick shingles are easier at the following prices: extras \$3.55 to \$3.75; clears, \$3.30 to \$3.40; 2nd clears, \$2.75 to \$2.85; clear whites, \$2.65 to \$2.95; red cedar extras, 16 in., five butts to 2 in., \$3.65; Washington, 16 in., five butts to 2 in. extra red cedars, \$3.60 to \$3.80. Eastern hemlock stocks are moving slowly at Boston. Sales have been made of 10 in. to 16 in. butted at \$23 to \$23.50. Random lengths vary from \$1 to \$1.50 lower.

At New York, the prices are holding about steady on eastern spruce. Random stock is not very active. Yard stocks are light and so are enquiries. The volume of trade in hemlock is lower than usual at this time of year.

Great Britain

In welcome contrast to the rather gloomy trade reports which have been published in connection with business in Great Britain of late, come the Board of Trade reports for the month of November. Judging from the comments of the leading financial and commercial papers, the figures are much more encouraging than was generally expected. The wood trade, along with all other branches of commerce, gave evidence of a pessimistic spirit during November, and trade statistics were awaited with some anxiety. It would not have been a surprise if a considerable decrease had been shown in the volume of the oversea trade. The statistics, however, are of a more favorable nature than was expected and may reasonably be taken as good ground for encouragement. Exports show an expansion of £1,397,000, an increase of three per cent. as compared with the figures of November, 1912. Imports show a decrease of £2,514,000, a little over three per cent. The month of November, however, contained one working day less in 1913 than in 1912. Exports of nearly all stable industries expanded during November. The principal reductions were in iron and steel. In this case, however, the reduction was only in value, the quantity being greater. In the imports, nearly half the decrease occurred in cotton. Taking the month as a whole, the statistics have given quite a hopeful feeling to industry. This is considered as an induction that, although the crest of the wave of trade prosperity may have been reached, no real contraction is under way. This is especially noticeable when one considers that comparisons in 1913 are made with those of 1912, when all previous records were greatly surpassed.

The timber trade at London, during the past fortnight, was quiet, as a result of the approaching end of the year. Values have shown no alterations, good stocks holding their prices, although stocks that are off color have been hard to sell. Deliveries at London docks during the week ending December 6th totalled 4,501 standards, as compared with 5,862 standards and 4,695 standards for the corresponding weeks in 1912 and 1911, respectively. At Churchill & Sim's recent auction sale, 3 x 9 second Quebec spruce was sold for £12 10s. and £12 5s., while 3 x 7 brought £10 10s. and £10 5s.

The trade in spruce deals for future arrival at Liverpool is quiet, as is usual at this time of year. Operations are now confined to small shipments by the liners, and will so continue during the winter months. A fair consumption is in progress for the time of year, as a result of the mild weather, which is favorable for building operations. At Manchester, timber trade conditions are favorable. Prices are firm at about £10 5s., ex quay for 3 x 7 in. spruce as a basis. Pine goods, especially deals of all qualities are very firm. Wide Miramichi deals have been sold at about £14 per standard, which is a record.

United States

Business conditions continue to provide a puzzle in the United States. Very conflicting reports are received, although with the end of the year, there was a general slowing down and a decrease in the volume of business. Orders have been very largely for immediate requirements and have been marked with the "rush" sign, which is taken by some to be a cheerful indication in connection with the trade for 1914. There is no question whatever that stocks are at a minimum and that with normal business or anything approaching it, orders will have to be heavier in the very near future. Another sign of the times is the infrequency of cancellation of orders. Shipments have apparently reached the point where they cannot go much lower and it is generally believed that they must soon increase. A great deal of hesitation has been caused by the new currency bill, as business men have been waiting for its passage by Congress. It is thought that, with this



View of Mills in Sarnia.

Quality, Quantity, Service

Look your stock over, and send us an order for what you need or wire for quotations. We always have large stocks of

***Norway and White
= Pine Lumber =***

Also large timbers cut to order, any length up to 60 feet, from Pine and B. C. Fir.

***Headquarters For
Norway Silo Stock***

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

measure out of the way by the end of the year, strained money conditions should ease by the middle of January. Improvement thereafter may be slow, but should result in greater activity by early spring.

In the lumber business, buying to meet current demands for consumption is extensive. Some of the line yards have been placing many orders for delivery early next spring. Railroads also, are commencing to buy timbers, ties, etc., for repairs. In spite of the apprehension which has been felt in the lumber trade during the past few months, it is quite likely that lumber manufacturers, when making up their annual statements, will find that 1913 compared favorably with 1912. To substantiate this idea, one may point to the lumber receipts at Chicago, which broke a record during 1913 and were very nearly three billion feet. All these indications point to an active trade early in the new year.

The southern pine situation showed improvement towards the end of the year. The aggregate movement of all kinds of building lumber has been large and accumulations at the mills are not extensive. A normal spring demand should provide a good outlet for all kinds of yellow pine and place the market upon a fairly satisfactory basis. The chief difficulty in yellow pine at present is the low range of prices, which does not permit anything, but a very small profit. Apparently the competition among sellers has been much too keen for the small amount of business offered. Really profitable business can scarcely

be expected until the arrival of large orders and contracts ahead of delivery.

The trade on the Pacific Coast has apparently improved. Prices have not advanced, but the market is steadier and foreign shipments are extensive. Sugar pine and white pine mills have closed down for the winter. The season's cut was about up to normal and shipments have been at about the average.

Weather conditions are poor for northern loggers, who are dependent upon snow and frozen roads to do their hauling. White pine and Norway lumber are steady and there is a strong demand for the lower grades. The outlook in the north-western territory continues fairly active, on account of the mild weather. The factory trade is quiet. Stocks on hand are only moderate. The trade in hemlock is about at the average for this time of year. Consumption held up well during December. No accumulations of stock are reported from Pennsylvania mills and prices are expected to continue steady. Stocks in the north are light and broken. Generally speaking stocks are not plentiful and increased consumption would quickly strengthen values. A seasonable demand continues for hardwoods. Consumers have only light stocks and orders are quite plentiful. The end of the year financial statements will show that hardwood manufacturers have done a very fair business. Buyers are looking for maple and birch for future delivery.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

St. John Trade Marking Time

St. John, N.B., December 22nd (Special to the Canada Lumberman): This is not the time to look for any expansion in the volume of business, especially from this port, as all the mills, with the exceptions of Messrs. Stetson, Cutler & Company and Randolph and Baker have ceased operating for the season. The holidays now taking place here and elsewhere are keeping trade quiet. Business in the lumber trade is about at a standstill and will really mark time, as it were, until about the middle of March, when the mills will get under way again. As to prices for stocks, little change can be said to have taken place. Really, there are no stocks for sale, as all the English deals are in the hands of the shippers here, viz., Messrs. W. M. Mackay, Geo. McLean and J. E. Moore & Company, and the American stocks, with a few exceptions, are in the hands of Messrs. Stetson, Cutler & Company. A certain quantity of English deals are being shipped on each liner sailing from here, but are said to be practically all on order. Business is reported to continue pretty good, on the other side of the water, and no immediate reductions in price are looked for. Of course, there is great unrest among the laborers in Great Britain, and should any serious strikes take place it would at once be reflected in the lumber trade. This, it is hoped, will not be the case.

Prices of English deals remain about as last quoted, viz., \$16.50 to \$17.00 per M. for city cut deals, with fourth quality and ends at the usual reductions. Portable rotary cutting of deals will not be as heavy in the lower sections of the Province during the coming winter, as was the case last year. The season has been very open, making the yarding of logs to the mills particularly difficult and limiting the amount of logs to be put up. Help of all kinds for woods works, is very scarce, and wages are higher than last year. Also, no inducements for good markets or prices were held out to these operators, by the buyers, and men were more or less discouraged. Stocks of English deals are not heavy, in fact are lighter than for some time, few of the mills here having any stock to speak of. American shipments are about at a standstill. Those who have American size prefer to await for better business in the States. The base pine for schedules is about \$25.00. The selling of random is a hard matter and a sacrifice would have to be made. Laths only remain firm, \$4.00 being about the New York price. About all laths on hand here have been sold.

Logging conditions have not improved to any great extent, the first cold weather having come within the last day or two, very little snow has fallen any where in the province, but as yet it has not been needed, as operators do not expect to begin hauling before January.

The cut of logs all over the Province will be less than last year, but as yet the extent of the shortage is hard to foretell.

Mr. Miller of Price and Pierce, London, England, is now in St. John, having arrived on this side some ten days ago. He is making a tour of the trade over the Province, in the interests of his house.

Ottawa Manufacturers Anxious for Snow

Ottawa, December 20th (Special to the Canada Lumberman): Unless a heavy fall of snow comes soon, followed by a spell of severe frost, lumbermen predict that operations in the woods will be seriously retarded and the cut this season will be even smaller than it was last, which will mean a substantial advance in prices next Spring. At present there is comparatively little snow in the eastern or northern sections of the country and lumbering operations are being delayed. Locally, conditions are quiet and there is no indication that they will improve until after the New Year. There has been no alteration in prices lately.

About the most interesting event that has happened this week is that the railways have decided to continue the cartage system after January 1st instead of cutting it off as they proposed. Last Tuesday, lumbermen, manufacturers and other shippers appeared before the Board of Railway Commissioners and asked the board to compel the railways to provide better facilities for handling in-going and out-going freight, since the railways had decided to withdraw from the business. At the hearing, representatives of the C. P. R. and Grand Trunk refused to consider the suggestion made by Vice-President Gundy of the Toronto Board of Trade, that the system be continued. To-day, however, the Board of Railway Commissioners announced that the railways had accepted the suggestion on condition that the shippers pay the exact cost of the service to the cartage companies, which, it is understood, they will be pleased to do. Frank Hawkins, secretary of the Canadian Lumbermen's Association, was at the hearing in the interests of the members of the association. The board was informed by the shippers that if the railways carried out their original proposal it would bring about a dislocation of business of all kinds.

A deputation of western and eastern farmers, representing the Western Grain Growers and the Dominion Grange waited on Premier Borden and his cabinet last Tuesday and asked among other things that lumber coming from the United States be placed on the free list. The farmers said that the free importation of lumber from the United States would enable them to get it cheaper than by buying in eastern or western Canada, from which points they have to pay high freight rates. Lumbermen would undoubtedly raise strong objections should the government show signs of acceding to the request of the farmers.

In the face of general talk about the financial stringency, it is interesting to note that there has been a substantial increase in the exports of forest and lumber products from Canada during the eight months of the present fiscal year. The figures are \$777,624,000, as against \$713,614,000 in 1912.

Mr. J. R. Booth, who was seriously injured sometime ago is still making good progress towards complete recovery. If he continues to gain in strength he will be able to get out in the course of a few weeks and go for a drive. His leg, which was broken, has not yet knitted thoroughly.

DRY SPRUCE BOARDS

WE have them and can ship promptly now, but cannot promise to do so later because the annual car shortage will be with us.

¶ We have the largest stock of dry Spruce boards in Canada. Our assortment is now complete, but with the volume of orders we are receiving we will be short of certain items before long. If you are going to need Spruce boards this Fall, order early and make sure of having them when you need them.

¶ When ordering get the best,—the Silk Finish kind,—from the most reliable source, from the people with the most up-to-date dressing mills, the most efficient service.

John Fenderson & Co.

Incorporated

Sales Office

27 Besse Place
Springfield, Mass.

MILLS AT

Sayabec, Que.	Cedar Hall, Que.
Salmon Lake, Que.	St. Moise, Que.
Jacquet River, N. B.	

**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

Montreal Market Report—Trade Still Quiet

Montreal, December 23rd (Special to the Canada Lumberman): Having regard to the season, trade is on a moderate scale. Some wholesalers complain of dull times, while others state that business is quite satisfactory. Stocks are reported to be low, dry lumber being scarce, particularly the common qualities. Lath is in fair demand, but is in short supply.

The year which is drawing to an end has been, on the whole, a good one for most firms in the lumber trade. Many wholesalers have had a larger turnover than in 1912, and although there has been a tendency to hold up important building projects, the majority of retailers have probably transacted a larger trade than in the previous year. Should monetary conditions become easier in 1914, there is every prospect of a quickened demand for lumber. It is certain that several schemes which have been postponed will materialize, and in addition there is an ever-increasing demand for flats and residences—a demand which was not satisfied during 1913.

Business in dimension timber is very slow, although many contracts are outstanding. Complaint is also made that prices are very low, with the prospect, however, that quotations will advance next year.

Snow is required in the Eastern Townships, in order that hauling operations may be commenced after the turn of the year.

There is little change in the ground wood market. Inroads are being made upon the accumulated stocks on hand. There are three mills with heavy stocks, from the dull period through which the trade passed, and until these are absorbed prices have no prospect of advancing. Any serious curtailment, however, of the water power in the United States would have the effect of largely reducing the stored pulp. For fresh pulp \$17 to \$18 per ton at the mill is obtained in some instances.

The demand for chemical pulp is better. Prices for spot shipments have been easier, but makers are asking the same figures for contracts for next year. One of the largest mills in the United States has contracted for 85 per cent. of its production next year, although it is admitted that the mill has some surplus of the present year's make, owing to the curtailment of contract deliveries. The outlook for 1914 is very much better now that the full effect of the tariff legislation in the United States is discounted.

News print is in a good position, the Canadian mills having sufficient orders to keep them fully running. It is well known that the very large quantity of news that came onto the market from the new installations had a considerable effect upon the business of the United States mills, and that some new mills in that country have had to seek a market for their lines of paper in consequence of Canadian competition. This has caused a rearrangement of production in mills making lines other than news, and has somewhat disturbed the calculations of such mills. It is well understood there will be business for all, and that the advent of from 100 to 150 tons per day of news from new mills next year will not prove of a serious character, as the export market for news from some of the Quebec mills is growing very rapidly, particularly to South America.

Barbados Market Report

S. P. Musson, Son & Company, Barbados, report under date of December 5th, as follows:—Lumberstuffs—White Pine—Receipts during the fortnight have been heavy, consisting of 281 m. ft. by the Trn. Schr. "Santa Maria" from Ingraham Port, N.S., and 110 m. ft. by the "Burnett C," from Shelburne, N.S., to selves, and 237 m. ft. by the Trn. Schr. "Rescue" from Hantsport, N.S. All of these cargoes were previously contracted for at \$34 for merchantable, and \$26 for second quality, and arriving to an already overstocked market have had a very depressing effect, and we do not think there will be an opening for a cargo for some time to come. Spruce—The "Rescue" brought down 107 m. ft. which had been sold to arrive. Stocks of this description of lumber are also heavy, and dealers are not inclined to make any further purchases at present. Pitch pine—No receipts, but stocks are ample for present requirements. Shingles—The Trn. Schr. "Ainslie" arrived on the 1st inst. from Bonaventure, with 1,837,000 cedar laying, which had been sold to arrive at \$2.55. No receipts of Long Gaspé. Shooks.—The S.S. "Honoreva" from Mobile brought 200 bds., which had been imported by a dealer. Wood hoops—Receipts consist of 350 bds. by the S.S. "Catalina" imported on dealers' account.

London Market Report

Churchill and Sim, London, Eng., in their wood circular under date of December 4th say: There is little change to report in the conditions of the London Wood Market for November. Prices of stock of the better grades stored under cover in good condition have been a little stronger, and although, speaking generally, London is suffering

from an accumulation at present, the surplus quantity consists largely of rough boards and inferior descriptions of deals and battens, prices for which are consequently lower. The flooring position keeps strong and prices moved a point upwards during the month. Deliveries declined by some 3,000 standards, mainly due to the satisfying of the overside demand during the two previous months. Buying cannot be said to be general, yet sellers are showing no anxiety to press the market. This is a very wise policy, for most buyers are more heavily stocked than usual at the end of the season, and will require some respite before they can calculate their probable requirements for what promises to be a difficult year in which to make trading forecasts. Freight is easier, especially from the Lower Gulf at the present time, and quotations for Spring and Summer shipment are upon a lower level. Stocks of timber, deals, etc., at the public docks on the 30th November included the following:—

Colonial	1913.	1912.	1911.	1910.
Pine deals and battens in pieces	589,000	512,000	432,000	547,000
Red pine in pieces	21,000	24,000	48,000	73,000
Spruce ditto, in pieces	849,000	538,000	426,000	746,000
Oak timber in loads	—	—	32	51
Oak planks, etc (American)				
in loads	3,415	1,207	2,571	1,486
Birch timber in loads	319	226	403	350
Birch planks in loads	6,737	5,003	5,180	3,500
Elm timber in loads	1,540	547	841	1,179
Ash timber in loads	—	12	3	45
Yellow pine timber in loads	1,030	936	341	313
Red pine timber in loads	—	—	—	—

From the St. Lawrence has been imported—

Pine deals	492,000 pieces	against	548,000 pieces in 1912.
Spruce deals	1,033,000 pieces	against	721,000 pieces in 1912.
Birch planks	301,000 pieces	against	316,000 pieces in 1912.
and from New Brunswick—			
Pine deals	32,000 pieces	against	50,000 pieces in 1912.
Spruce deals	433,000 pieces	against	404,000 pieces in 1912.
Birch planks	336,000 pieces	against	384,000 pieces in 1912.

Pine and spruce have arrived freely during November and stocks have accumulated a little, especially spruce. Prices of pine deals have not altered, except for some inferior parcels, which are sold entirely on their merits and have little effect upon the value of the best stock. Prices of spruce declined during the month; they had driven to a very high figure, and the arrival of a little extra quantity was sufficient to put them down rather sharply, aided, as it was, by a resumption of business at the Lower Ports and easier rates of freight. There is no change to record in the position of Canadian hardwoods.

British Columbian and Oregon pine.—The arrival of two large cargoes has refreshed the stock, which was getting too low. Cheaper quotations for sailing tonnage ahead are checking business, and inspiring buyers with a fear of operating in a market which must be always more or less speculative, owing to the necessity so far in advance of requirements.

Liverpool Market Report

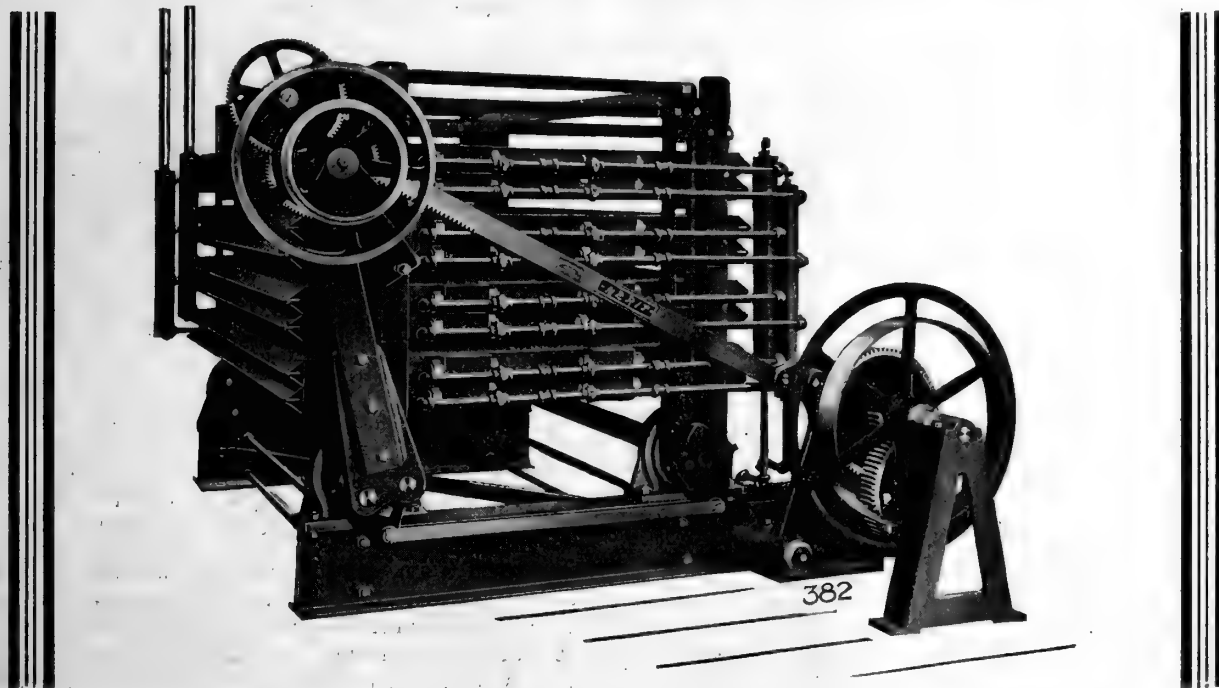
Farnworth & Jardine's wood circular under date of December 1st, say:—This market has continued very languid during the past month. Arrivals have not been excessive, but deliveries have again been disappointing, aggregating about 13 per cent. below the figures for the corresponding month last year. Stocks generally are adequate, and in some of the leading articles too heavy. Values have not fluctuated to any material extent. Ocean freight rates unchanged.

Canadian Woods—Pine timber—The arrivals have been nominal, but there is no improvement in the demand to report; values continue to rule high. Waney pine, 1st class: one small parcel of 20 loads has arrived at Manchester; some further inroads have been made on the stocks in that port, which are not now excessive; values are unchanged; second class is in limited demand; stocks though not heavy, appear quite sufficient. Square pine has not been imported, and there is little enquiry. Red pine—The stock is light, but this timber is seldom enquired for. Oak—The arrival to Manchester have amounted to 31,000 cubic feet; the bulk of this is on contract, and will largely go direct into consumption. Stocks are not excessive and values firm. Elm—No arrivals and a very limited demand; the small stock is firmly held. Pine deals have reached the market somewhat in excess of requirements; stocks are ample but values unchanged. Red pine deals have been only in limited demand.

New Brunswick and Nova Scotia Spruce and Pine deals—The import to the Mersey (including Manchester) amounted to 1,630 stds., against 1,910 stds., during the corresponding period last year, and practically all to Liverpool; deliveries from store were up to expectation, and the stock at Manchester has been considerably reduced, but is still heavy; for the remainder of the year it is expected that arrivals

Are You Drying Veneers?

Please do not waste your time reading this ad. if you are not desirous of getting bone dry and flat veneers. We do not want to reach you at all.



We want to reach any and every up-to-date manufacturer striving to make his veneered stock as near perfect as possible.

Such manufacturers we are in a position to aid considerably by installing one or more of our

Balanced Plate Driers with Breathing Motion

and we will put the Driers in your glueroom on a blanket guarantee when we know what kind of stock you are working on, size of your veneers and thickness.

Do you think you know all about it?

We know, you do not, because this is different from the toggle joint—flexible—leaky steam pipe propositions you have heard of before.

Our Catalog A will tell you a common sense story. It is yours for the asking.

Start the New Year right and put your glueroom department on a scientific basis—and do not blame the glueroom man for bad work if you do not know that he has perfectly dry stock to handle.

Merritt Manufacturing Company
Lockport, N.Y.

will be very light; values are barely maintained. Pine deals are in limited request at unchanged prices.

Birch.—Logs—One small shipment of Quebec timber has been landed at Liverpool; deliveries have again been small; values unchanged. Planks reached the market in moderate quantities and have continued in fair demand; stocks are not excessive; values steady.

United States Oak.—Logs—From Mobile 8,000 cubic feet have reached the Liverpool market. The demand is not active but stocks are moderate; values unchanged. **Oak planks—**The import during the past month has been moderate and the consumption shows a slight improvement; stocks are still heavy and including outside depots amount to 404,000 cubic feet, as compared with 343,000 this time last year.

British Columbia and Oregon Pine.—The arrivals have been to Liverpool and have consisted of 106,000 cubic feet of logs, 47,000 cubic feet of planks, and include an entire cargo from Bellingham, Wash. The great bulk of these arrivals still remain on the quay, but fair deliveries are now taking place at steady rates; stocks are quite sufficient for the existing demand.

Stocks at Liverpool and Manchester

H. W. Lightburne & Company, Liverpool, Eng., furnish the following statement of spruce, pine and birch at Liverpool and Manchester on December 1st, 1913:

Spruce and Birch

Month Ending November 30th, 1913

	Liverpool			Consumption			Stock		
	1911.	1912.	1913.	1911.	1912.	1913.	1911.	1912.	1913.
N.B. & N.S. Spruce & Pine, Stds....	650	1,110	1,570	2,900	2,390	2,170	5,930	4,820	9,140
Birch Logs, Loads	0	180	20	180	360	80	660	1,040	400
Birch Planks, Stds.	139	261	115	152	340	158	491	776	818
Manchester									
Spruce, Stds.	3,210	800	60	5,960	5,000	6,030	16,950	8,250	20,320
Birch Logs, Loads	10	80	0	50	20	40	180	500	240
Birch Planks, Stds.	36	24	121	121	170	97	145	582	625

Stocks in Manchester and Liverpool Combined

	Spruce		Birch Logs		Birch Planks	
	1909.	1910.	1911.	1912.	1913.	
Manchester	15,530	15,460	16,950	8,250	20,320	
Liverpool	6,600	7,740	5,930	4,820	9,140	
	22,130	23,200	22,880	13,070	29,460	
Birch Logs						
Manchester	150	100	180	500	240	
Liverpool	680	20	660	1,040	400	
	830	120	840	1,540	640 Loads.	
Birch Planks						
Manchester	1,267	491	145	582	625	
Liverpool	552	321	491	776	818	
	1,819	812	636	1,358	1,443 Stds.	

Montreal Exports Decreased in 1913

Montreal, December 16th; (Special to the Canada Lumberman): In our last issue we published the preliminary statement of the exports of lumber from the port of Montreal during the past season. Below will be found the complete figures, showing that the exports declined by 3,551,595 feet, contrasting with an increase of 5,897,544 feet in 1912 over 1911.

	1913	1912
	Ft., B.M.	Ft., B.M.
Watson & Todd, Limited	34,596,642	33,217,881
R. Cox & Company	18,326,191	17,316,113
W. & J. Sharples	13,571,128	12,943,460
J. Burstall & Company	8,905,256	9,149,894
E. M. Nicholson	7,695,305	7,670,003
Dobell, Beckett & Company	3,527,783	4,267,930
E. H. Lemay	3,522,941	8,857,349
Cox, Long & Company	1,878,741	2,211,896
Railways, steamship lines and small shippers	13,795,180	13,736,236

105,819,167 109,370,762

Decrease, season 1913 3,551,595

The following was the destination of the lumber:

	Ft., B.M.
South Africa	4,011,701
Australia and New Zealand	264,074
Great Britain and Continent	101,543,392
	105,819,167

Calendars for the New Year

The Midland Lumber Company, Union Trust Building, Parkersburg, West Virginia, are sending out a splendid office calendar for the year 1914, to their friends in the trade.

W. J. Smith, Weston, Ont., wholesale dealer in lumber, lath and shingles, has sent out an attractive calendar mounted on gray board and decorated with a colored picture entitled "When Nature Sleeps." The picture is a reproduction of a rural landscape in winter and is attractively colored.

A striking picture of a lumber yard scene is shown upon the calendar sent out by Joseph Bedard & Sons, Richmond, P.Q., "Quality and promptness" are characteristics of the business carried on by this firm and the picture on their calendar is an illustration of a yard in which these characteristics are evidently predominant.

West, Peachey & Sons, Simcoe, Ont., manufacturers of the celebrated Alligator Steam Warping Tugs, have again selected a design for their calendar which gives a graphic illustration of the splendid work done by these tugs. On the back of the calendar also is published a detailed description of the alligator tug and its work.

The Waterous Engine Works Company, Limited, Brantford, Ont., have sent out a fine large office calendar, handsomely designed and containing an excellent picture of their plant, surrounded by smaller pictures of several of their most important products. The calendar is specially designed for office purposes and will be very useful, on account of its large type.

One of the first calendars to reach the Canada Lumberman, for 1914 is an attractive souvenir sent out by the McGibbon Lumber Company, Penetang, Ont. The decoration is a striking picture in colors, entitled "A Woodland Sunset." The McGibbon Lumber Company are well known throughout Ontario and other parts of Canada as manufacturers of and dealers in lumber, lath, wood, etc.

A fine old sporting picture, painted by J. A. Mohlte, gives distinctiveness and charm to a large calendar sent out by Fred T. Smith, 310 Board of Trade Building, Montreal, P.Q., wholesale lumber dealer. The picture is entitled "His Favorite Mount" and represents a group of riding men in their characteristic hunting costumes, gazing at a large painting of a horse. The coloring of the picture is very attractive and striking. The calendar itself is printed in large type, making it very suitable for office purposes.

John Donogh & Company, Traders Bank Chambers, Toronto, have sent out to their friends in the lumber trade a large and striking calendar upon which the dates are printed in large type, specially useful in offices. The calendar is especially attractive to lumbermen on account of the interesting series of colored photographs which it contains, showing various important logging scenes, the whole grouped around a fine colored picture of an axe-man standing upon a log which he is chopping.

The Campbell-MacLaurin Lumber Company, Limited, Board of Trade Building, Montreal, P.Q., have again selected a very large calendar with an attractive colored picture for their new year souvenir. The title of the picture on the calendar is "Peaceful Valley," and it is a reproduction of a painting by Mr. M. H. Lowell, representing a picturesque farm house near a quiet stream. The calendar pad contains a record of the quarters of the moon and the type is very large, making it exceptionally useful for office purposes.

The Saw-Mill Owners Sales Company, Montreal, P.Q., have been especially successful in the selection of a calendar for the year 1914. "Softly the Evening Came" is the title of a beautiful photogravure colored by hand, which decorates the calendar. It represents a landscape at evening, the foreground being occupied by a stream and the background by the soft tints of an evening sunset. The picture is mounted upon cream colored board with a light brown margin and is tastefully subdivided into three panels which add greatly to the artistic effect.

The River Ouelle Pulp and Lumber Company, St. Pacome, P.Q., have chosen a splendid picture to decorate the calendar which they are sending to their friends in the trade for 1914. The calendar itself is handsomely designed and the colored picture is a reproduction of a painting by John MacWhirter, R.A., entitled "The Fallen Giant." The picture is reproduced by colored photography from an original oil painting and represents a fallen tree in a rough forest country. The beauty of the picture is in its simple composition and forcible coloring. Those who are fortunate enough to obtain copies of this calendar will prize it greatly.

Canada's Largest Lumber Manufacturing Plant

We are now operating the finest door plant in Canada

Our Fir Doors are the Cream of Quality, manufactured from the choicest Douglas Fir lumber, carefully selected and seasoned by the most improved methods, insuring the finest workmanship and beauty of finish.



**One of our
most popular
and inexpensive
designs**

**Made of Edge
Grain Stiles and
Rails, 3-ply Laminated
Fir Veneer Panels**

Our Two-Pan Stock Door

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MANITOBA
SASKATCHEWAN**

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L. D. Barclay, 66 King Street East, Toronto, Travelling Representative

H. W. Dickey, Lombard Street, Winnipeg

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R. J. Sullivan, Travelling Representative

W. W. North, Travelling Representative

A. Montgomery, Travelling Representative

Canadian Western Lumber Company

FRASER MILLS, B. C.

Limited

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Power Pointers or Alligators

The Adams Launch & Engine Company, of Penetanguishene, Ont., are furnishing many lumbermen in Canada with their well known power pointers or alligators, which have met with such success during the past two or three seasons. These pointers offer lumbermen an important opportunity of reducing their river costs. They can be operated by one man and will do the work of from six to ten men. They are especially useful when working over rapids or portages and can be used for warping and sweeping logs out of corners that an alligator or a steam boom could not reach. They are also very useful for carrying supplies, towing scows for the camps and bags of logs on the river.

The machinery in these power pointers consists of a strong reliable heavy duty engine of either 6, 8, 10, 12 or 16 horse power, a screw-gear winch or capstan 24-in. high from shaft to top of spool and a reverse gear. The reverse gear is not necessary, but is a great convenience, as by putting the control lever in the centre as shown in the cut the propeller is disconnected from the engine and the full power of the engine is used on the winch. The winch can be thrust in and out of gear with the lever shown on the back of the stand.

The pointers are built 26 ft. long with a 6 ft. beam. The free board amidships is 24 in. and the draft is 22 in. They are built of the best material to stand heavy strains. The ribs, stems, keel, rubbing and clamp streaks are of white oak. The planking is of cypress 1 1/4 in. thick on the bottom and 1 in. above water. Large oak strips are placed on the bottom of the hull to take up the wear when portaging. The ribs are steam bent and all in one piece and are bolted through shell at bilge corners and at clamp streak. The rudder is well protected as is also the propeller and these boats can be run right over logs and booms without hurting any part of the outfit. The machinery is installed amidships and is so arranged that one man can operate the line on the winch and at the same time take care of the engine. As a paying investment these pointers cannot be excelled where there is lumber or a great deal of work around the logs. Lumbermen interested should write to the Adams Launch & Engine Company for a copy of their large illustrated catalogue showing full details of these and other lines.

A New Pribnow Swage Shaper

E. C. Atkins & Company, of Indianapolis, Ind., have placed on the market a new Pribnow Shaper for band, gang, and circular saws. The accompanying illustration shows an outline of the shaper and the new and important features are briefly described as indicated by letters.

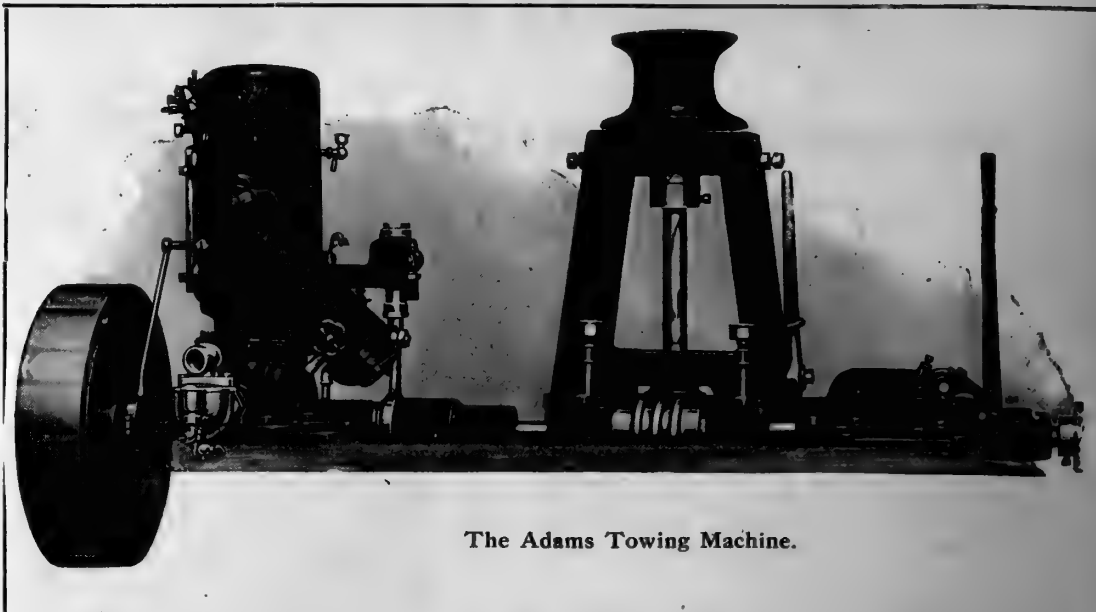
The base (A) is made of the best machine steel and is so designed as to furnish the greatest strength and durability. It is guaranteed not to break.

The tooth gauge holder (E) straddles the saw and holds the tooth stop exactly central over the swaged point. It is mounted on a cross slide which permits the tooth stop to free itself from the stationary jaw as soon as the clamping screw is released, thus furnishing the same advantage as a right and left hand screw, and assuring a uniform movement of both dies against the tooth, thus overcoming the objectionable features of the stationary jaw.

The tooth gauge is made in two parts. The upper part (H) lies flat on the back of the swaged point and acts as an anvil. The lower part (I) is a straight bar, the end of which may be filed or ground to meet the size of swage die, and clear the extreme point and also gauge the tooth from the root of the swaged portion. At the same time it prevents the destruction of the swaged point in shaping. The tooth gauge can be instantly removed or replaced for inspection and refitting by slightly loosening the set screw (W) and opening the clamp screw a full turn. Then the tooth gauge will drop out, between the jaws on the under side of the shaper. It can be replaced in like manner.

The clamping screw has a quick acting double thread and works on the extreme end of shaping jaw. This furnishes the greatest power at the required point and with the least friction.

The back rest (J) rests on two teeth and can be instantly ad-

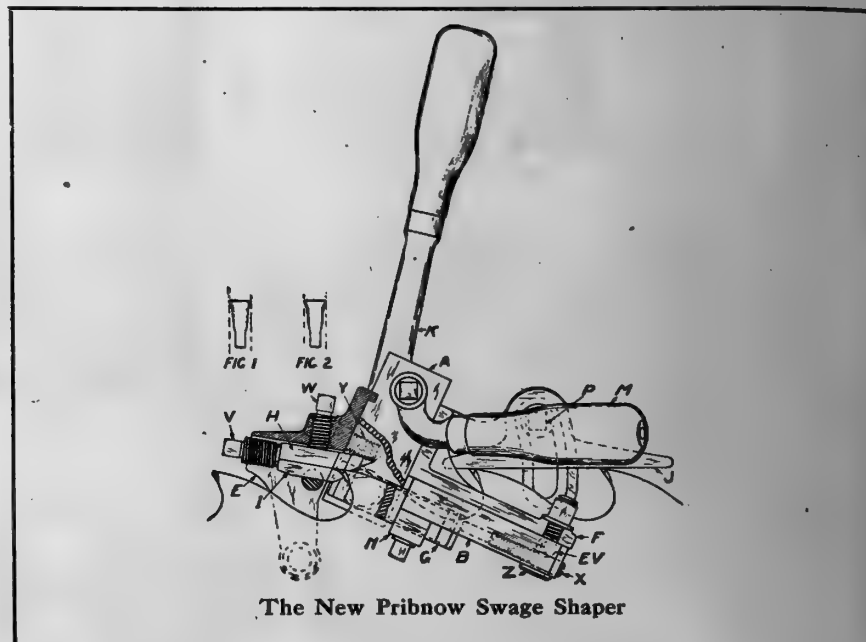


The Adams Towing Machine.

justed for either band or circular saws, and the shaper set at such an angle that part (H) of tooth gauge fits the various angles of tooth points perfectly. The shaper is so balanced that the tooth stop comes in contact with one tooth at a time only, which makes it very convenient to shape short or damaged teeth.

The shaping saws are fitted with a double lever working point, as shown at (G) for the maintenance of which a grinding gig is furnished with each shaper. Fig. 1 shows the front view of a shaped point, and Fig. 2 the back view.

The extreme cutting point has a greater taper and the intermediate section has a lesser taper at the angle the shaper is adjusted on the saw. The swaged point is tapered downward and backward, leaving the cutting edge the widest. The extreme point does the cut-



The New Pribnow Swage Shaper

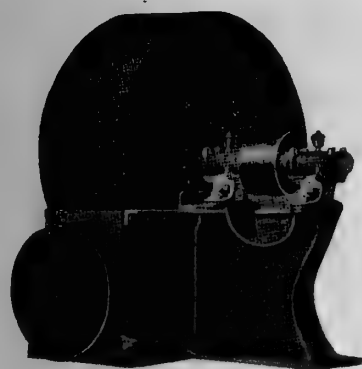
ting while the intermediate section clears the kerf for the tooth to follow, also giving a stronger support for cutting corner. It stiffens the point and prepares the stock for reswaging, which is otherwise wasted in grinding or dressing the teeth to maintain the desired shape.

The swivel brackets (B) carry a hardened point at (EV) which forms a guide for the back end of the shaper. This together with the forked tooth gauge holder guides the shaper in perfect alignment with the saw.

An Important Interior Trim Catalogue

The Knight Manufacturing & Lumber Company, Limited, Meaford, Ont., have recently issued an attractive illustrated catalogue

With the
Compliments of the Season
The Manager and Staff
 of
The Saw-Mill Owners Sales Co.
 Montreal - Canada



WHY you should install the
Mahony Blower

System in your Planing Mill

Fifty per cent. higher efficiency than any other on the market to-day, uses $\frac{1}{4}$ less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

A. Mahony, 512 Wellington West, Toronto

The Shaw
Motor-Headworks
 or
Gasoline Warping Tug

ORIGINATED BY LOGMEN TO
 TOW LOGS

Light Enough to Portage On a Tote Sleigh
 Powerful Itself

Speed under propeller 7 miles per hour.

Towing power 2 million feet.

OPERATED BY ONE MAN.

Manufactured by

RUSSEL BROTHERS
 Fort Frances, Ont.

Jenckes Boilers

WE make a specialty of large Tubular Boilers for regular or Dutch oven setting for saw mill service. Our Boilers are built to conform with the various Provincial Inspection Acts and each is rigidly inspected and tested under high pressure before shipment.

Ask for quotation.

The Jenckes Machine Co.

Limited

Sherbrooke - Montreal - St. Catharines - Cobalt - South Porcupine - Vancouver - Rossland
 Works: Sherbrooke, Que., St. Catharines, Ont.

showing lines of their stock patterns of interior trim in oak and birch, which should prove of interest to readers of the Canada Lumberman. This progressive company are placing on the market a line of goods which is becoming fast known for its high quality. Experienced workmen are employed in manufacturing these goods and careful inspection is made after every individual portion is made, thus insuring uniformity of output. The company will be glad to send any reader of this paper a catalogue upon request.

The Smart Turner Machine Company, Limited, Hamilton, Ont., are supplying the Armstead Wolvin Company, Limited, Port Arthur, Ont., with an automatic feed pump and receiver.

An Interesting Catalogue of Lumbering Tools

An interesting catalogue of lumbering tools, manufactured by Argall Bros., Three Rivers, P.Q., has just been published, which will be valuable to all logging operators. The catalogue is extensively illustrated and covers a variety of lumbering tools which will meet practically every requirement. Argall Bros., have been in business since 1860 and their products have set a standard for all other manufacturers. They are used in all parts of the country from the Atlantic to the Pacific Coast and their design and quality are of exceptionally high grade.

Lawsuit Settled

An action by the Ambursen Hydraulic Construction Company of Canada, Limited, Montreal, against the Dominion Paper Company, Quebec, has been settled by consent. The plaintiffs entered into a contract to construct a dam for a hydro-electric development on a 15 per cent. basis, but after two months' work were stopped, on the ground that the methods were too costly. The plaintiffs thereupon sued for breach of contract and for damages, and the defendants entered a counter-claim for a large amount. Under the settlement the Ambursen Company will receive \$16,000 for commission and an agreed sum for damages, the counter-claim being withdrawn.

Reducing the "Working" of Wood by Kiln-Drying

A great source of annoyance to all woodworkers and users is the tendency of the material to shrink and swell with changes in atmospheric conditions. This is due to the fact that wood substance is hygroscopic—that is, it attracts or absorbs moisture from the air. Increase in the moisture content of fairly dry wood causes it to swell, and drying out causes it to shrink. This property of wood can be reduced, but not entirely eliminated, by subjecting wood to boiling, steaming, prolonged soaking, or exposure to high temperature.

To determine just what effect kiln-drying has on the subsequent moisture condition of wood as compared with simple air-seasoning, a number of tests were conducted by the Forest Service in co-operation with the Yale Forest School. The test specimens were of two sizes, 2 x 2 x 6 inches and 2 x 1½ x 30 inches. Three sets of seven pieces each were taken for each of three species, and for each of the different temperatures used. One set was simply air-dried and used as a check (C) with which to compare the other two sets of that series. Another set (A) was first air-dried for about a year, then kiln-dried, and finally placed aside with the check specimens to air for a year or more. The third set (B) of the series was soaked from the green condition for the same length of time that the other sets were air-dried, was then kiln-dried with the second set and placed in the air with the others. The airing took place in the open under a shed on the north side of a building where they were protected from sun and rain. The comparative

tests were all made at the same time which adds to the reliability of the results.

A comparison of the water content of the pieces that were kiln-dried first with that of the pieces that were only air-dried showed that in no case did the kiln-dried material absorb as much moisture as the other.

For example, air-dried and water-soaked red oak blocks were kiln-dried at maximum temperatures of 145 deg., 170 deg., 212 deg., and 274 deg. They were then exposed to the air for a year or more and their average moisture content at the end of that time determined. The results were as follows: At 145 deg., previously air-dried (A), 7.6 per cent.; previously soaked (B), 9.6 per cent.; check specimen, air-dried only (C), 12.4 per cent. Similarly for the other temperatures the figures were: At 170 deg., (A) 10.6, (B) 10.6, (C) 12.4; at 212 deg., (A) 9.4, (B) 9.5, (C) 12.0; at 274 deg., (A) 8.9, (B) 9.9, (C) 12.6. From these figures, each of which is an average of seven tests, the reduction in hygroscopicity due to kiln-drying appears to be a permanent change by some fundamental change in the wood substance.

The degree of dryness attained, when strength is of prime importance, should not exceed that at which the wood is likely to remain in use, but where reduction of the hygroscopic properties of wood are of first consideration it should be carried to as great a degree as possible and subsequently brought back to the condition under which the wood is to be used by exposure to the air for some time before the lumber is manufactured.

St. Maurice Protective Association Had Successful Year

Montreal, December 17th (Special to the Canada Lumberman): The St. Maurice Forest Protective Association, Limited, continues to do splendid work in protecting from fire the limits of the firms who are members of the association. This is the only society of the kind in Eastern Canada, there being one other in the West.

The previous year was largely a period of organization. During the past season the association has been in working order and has proved of great value in preventing the destruction of very valuable limits. The area of just over 11,000 square miles, or 7,280,000 acres, is patrolled by 52 fire rangers and four inspectors. The territory is divided into divisions, each in charge of an inspector, and in turn the divisions are split up into districts.

During the past season there were 307 small fires, which were prevented from spreading owing to the vigilance of the staff. The season was a dry one, and it is certain that, had not the fires been discovered, much timber would have been destroyed. Eight look-out stations have been constructed, and these are connected by means of telephones. In addition 20 miles of telephone wires have been installed. The association has also built during the season 200 miles of new trail. The rangers patrol the right of way along the Transcontinental, five motor speeders being used for the purpose.

The Quebec Government have backed up the efforts of the association by financial assistance, Hon. Jules Allard, Minister of Lands and Forests, being a strong believer in the system of the association.

The officers are: Messrs. J. M. Dalton, Gres Falls Lumber Company, Three Rivers, president; S. L. Decarteriet, Quebec and St. Maurice Industrial Company, La Tuque, vice-president; L. Denyears, director of the Belgo-Canadian Pulp & Paper Company; R. F. Grant, St. Maurice Lumber Company, Three Rivers; F. I. Ritchie, Wayagamack Pulp & Paper Company, Three Rivers, and Ellwood Wilson, Laurentide Company, Grand Mere, directors; H. Sorgius, manager, Three Rivers.

The Pearl City Veneer Company, Jamestown, N.Y., report that business is keeping up very well for this time of year.

E. H. Heaps & Co., Ltd.

Lumber, Shingles, Doors, Mouldings, Finish, etc.

**Specialties: AAI BRAND HIGH GRADE SHINGLES
LONG FIR TIMBER**

**Mills at
Vancouver and Ruskin, B. C.**

**Head Office: 445 Hastings Street West
VANCOUVER, B. C.**

He's a wise
man who
realizes that
true belt
value lies
in its cost per
day of Service ~



He's also wise who orders

“**AMPHIBIA**”
WATERPROOF

Leather Belting

Because

it costs less per day of service

This fact renders “AMPHIBIA” the least expensive belting irrespective of any comparisons of “first-cost-per-foot-length.”

Get “AMPHIBIA” and be satisfied.

Sadler & Haworth

Tanners and Manufacturers

For Over 36 Years the Makers of the Best Leather Belting

MONTREAL: 511 William St.
ST. JOHN, N.B.: 89 Prince William St.

TORONTO: 38 Wellington Street East
VANCOUVER, B.C.: 217 Columbia Ave.

WINNIPEG: 244 Princess St.

TO INSURE SATISFACTION—STATE WHERE BELT IS TO RUN

Alfred Dobell & Co's. Report

Alfred Dobell & Company, Liverpool, Eng., in their timber market report under date of Liverpool, December 1st, say:—There is little or no change noticeable in the market since our last report. Business throughout the month was quiet and although in the aggregate the consumption has exceeded the arrivals, stocks of several important articles are still much too heavy and values have a drooping tendency.

Canadian woods—waney board and square pine—The consumption has been restricted owing to the competition of the lower priced Siberian Pine. Oak—No change. Rock elm—The stock is light and prices very firm. Birch—Logs—The demand is quiet except for fresh St. John wood. Values steady. Planks—There was a moderate import and consumption. Stock is heavy. Pine deals and boards again came forward plentifully and met a fair demand. Stock ample. New Brunswick and Nova Scotia spruce deals—The import to the Mersey and Manchester combined was 280 Standards below that of the same period last year, the arrivals to Manchester being only 60 Standards for the month, which must be a record. The consumption was somewhat above the average, being 810 Standards up. Stock is still more than ample. Prices steady.

Quebec's Proposed River Tolls Act

The following is the text of the principal clause in the Bill introduced into the Quebec Legislature by the Government, relating to tolls for the floating of timber on rivers and water courses:—"The Minister of Public Works and Labour may order an investigation to establish the nature, value and cost of works so executed and constructed in rivers, lakes, ponds, creeks or streams to facilitate the floating of timber, or the tariff of tolls that should justly be established, to be made by any court, person or corporation he may indicate and which shall report to him."

Canadian Matchwood Wanted in South Africa

The safety match industry of South Africa imports annually from Russia about 6,000 tons of 40 cubic feet of the aspen log. Some years ago a sample lot of the same wood was secured from Canada and the wood proved of even more value than the Russian as match wood, but was discontinued because the price of the Canadian log at the time was much higher than the Russian. The cost price f.o.b. at the time of sample lot for the Canadian log was 22c per cubic foot, and the cost of Russian log was 16c per cubic foot, but as prices at the present time are higher in Russia, this would be an opportune time for the Canadian lumber trade to make an effort to secure this market. A match company at Cape Town state that they would prefer to buy from Canada and invite correspondence. They are prepared to handle 6,000 tons of 40 cu. ft. The logs must be not less than 9 inches in diameter up to 20 inches and of course must be as clear of knots as possible. As it is stipulated that the wood should arrive in a moist condition, the bark must remain on the logs, and when possible the end of the logs should be painted over. In addition to being clear of knots, each log must be seven feet long and perfectly straight. The market can be secured if Canadian dealers will lay this article down not more than 18c a cubic foot f.o.b. either St. John or Montreal.

Ireland Wants Canadian Spruce and Fir Seed

The land and forest department of Ireland desires seeds of spruce and fir as grown in British Columbia for planting in the Emerald Isle. Chief Forester McMillan has just received an enquiry from the board as to the possibility of purchasing several thousand dollars' worth of these seeds in British Columbia, for reforestation purposes in Ireland. The land and climate there is believed to approximate that of the coast of British Columbia, and the Irish board states that it is anxious to get trees which will grow as rapidly as do spruce and Douglas fir in British Columbia. The chief forester has referred the enquiry to the Indian department, as the Indians in many places make a practice of gathering such seeds. The Hudson's Bay Company, and all other concerns likely to have spruce and fir seeds will also be asked to assist the Irish board. It is a fact not generally known that Germany and France in their reforestation annually use huge quantities of seeds of British Columbia trees which they obtain from British Columbia seedsmen and Indians.

Samples of Douglas fir from British Columbia are to be submitted to experts of the Dominion Government at McGill University for the purpose of standardizing this timber for the commercial market. For some years yellow pine, the qualities of which are well known, has enjoyed a monopoly as a building material in the eastern provinces, but it is expected that when these proposed tests are completed Douglas fir will take a larger place in the British Columbia export trade.

Personal and General News Notes

The twelfth annual meeting of the Hardwood Manufacturers' Association of the United States, will be held at the Gayosa Hotel, Memphis, Tenn., on January 21-22, 1914.

F. S. Green, formerly with the Fernridge Lumber Company, New Westminster, B.C., as sales manager, has taken a position with the Canadian Puget Sound Lumber Company, Victoria, B.C.

Wood block paving, tried and discarded in many cities of the United States thirty years ago, is now coming back into marked favor, due to improved methods of treating and handling the blocks.

German foresters are experimenting with Douglas fir from the United States, trying to find a variety which will combine the fast-growing quality of the Pacific Coast form and the hardness of the Rocky Mountain form.

Hon. P. T. McGrath, who is a member of the Legislative Council in Newfoundland, was a visitor to Toronto recently. He reports business conditions in the island colony as prosperous and says that the pulp mills of Newfoundland, which are the greatest in the world, are very busy.

The 1913 output of the Cranbrook, B.C., district, totalled 147,000,000 feet of sawn timber, including 500,000 ties. In addition there is a total of 1,000,000 ties yet in the woods as well as 750,000 feet of telegraph and telephone poles, 350,000 feet of piling, 18,000 cords of mine props and 7,500 cords of fence posts.

Reports from Montreal state that there is no scarcity of labor for the lumber camps during the coming winter. There is a larger demand than usual, but on account of the plentiful supply, wages are lower than last year. From \$25 to \$30 per month is now the average as against \$30 to \$35 last year. The same report states that Polacks are largely supplanting French Canadians in this work.

Mr. Thomas N. Phillips, of Timms, Phillips & Company, Limited, Vancouver, B.C., wholesale dealers in Pacific Coast lumber products, is making a business trip through Eastern Canada and was a welcome visitor at the office of the Canada Lumberman recently. In spite of the fact that business conditions throughout Canada are very quiet at present, Mr. Phillips reports that he has been able to secure some very encouraging orders. He will remain in the east for another month.

An Interesting Harness and Equipment Catalogue

One of the most modern and up-to-date catalogues issued by any Canadian manufacturer has recently come to hand from the firm of Lamontagne, Limited, Montreal, manufacturers of harness, collars, horse blankets and in fact everything that pertains to the needs of the horse. This book is printed on the loose leaf system, with heavily coated paper and contains upwards of 300 pages, thoroughly illustrating everything in the line of harness and horse equipment required for the lumber trade. Lamontagne, Limited, have been in business in Montreal since 1869 and year by year they have extended their business throughout the country, until at the present time their goods are to be found in all centres from Vancouver to Sydney. Besides their factories and warerooms at Montreal they maintain branches both in Winnipeg, Man., and Vancouver, B.C., where a full line of goods are kept constantly on hand. They manufacture a line of goods especially adapted to the lumber trade needs and every lumber firm finds their catalogue of great assistance during the buying season. A copy of the catalogue will be sent to any firm on request.

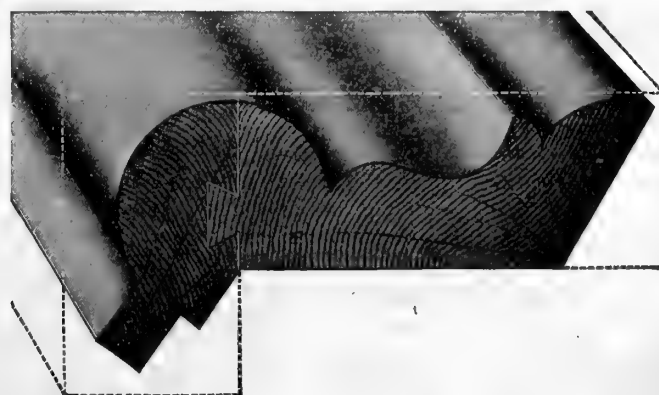
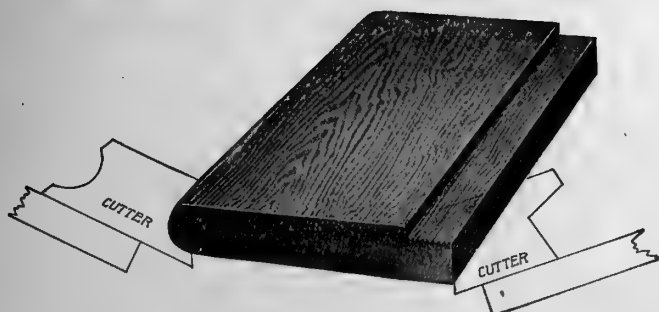
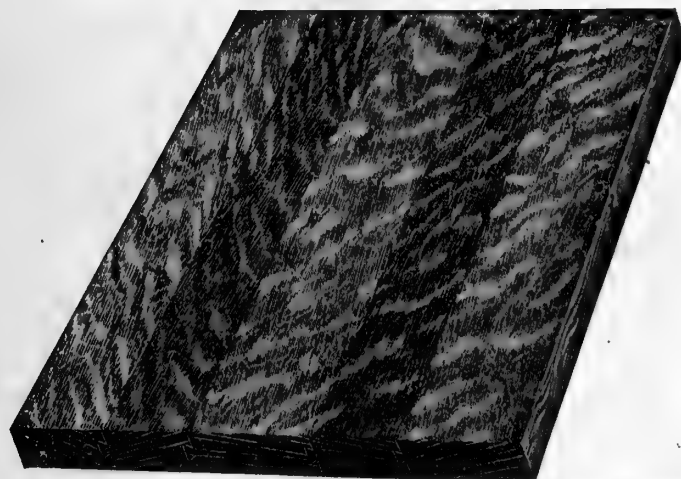
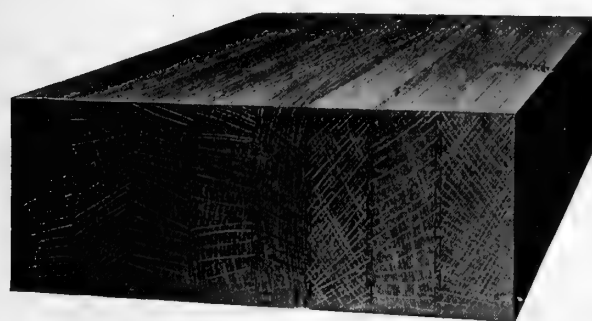
Increased Grant for Quebec Forestry School

The Quebec Government propose to increase from \$5,000 to \$8,000, its grant to the Forestry School, which is affiliated with Laval University in Quebec. In return for the larger grant of funds the Laval authorities will give a longer course of studies. The number of lessons or lectures will be increased from 900 to 1200 for the year. The course in forestry is one of three years, and consists of instructions in the nature of different kinds of soil suitable for the growth of trees, the classification of timber, and elementary engineering. Last year's classes had forty pupils. Laval University is constructing a new wing at the cost of \$60,000 in which the Forestry School will be conducted.

W. T. Whitehead, ex-M.P.P., Fredericton, N.B., died recently at his home after a long illness. Mr. Whitehead was one of the best known men in the province and was specially conversant with values of timber lands in New Brunswick.

Linderman Universal Dovetailer

NOT only will the Linderman Automatic Dovetail Glue Jointer do the highest grade joint work possible in flat or straight joints but it can be used for almost any class of work desired in a furniture or general woodworking plant. The illustrations shown herewith are but a very few examples and in all cases economy in labor, glue and lumber stand out as permanent, positive benefits to the user.



Canadian Linderman Company, Limited

Muskegon, Mich.
U.S.A.

— WORKS AT —

Woodstock, Ont.
Canada

OPPORTUNITIES

WE own and offer for sale on attractive terms a few especially well selected tracts of timber running from 50 million to one billion feet that are ready for immediate operation, having a good local demand at high prices.

The timber on the Pacific Coast is the last stand of the great forests. Well selected timber in British Columbia is the best investment on this Continent and offers especially attractive inducements for manufacturers.

For further particulars, address

A. C. Frost Company

Corn Exchange Bldg.
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LATH

Campbell - MacLaurin Lumber Co.

Limited

Board of Trade Building, MONTREAL



We
Are
Buyers

of

Spruce
and
Hemlock

Boards, Sizes, Lath and Shingles.
We buy F.O.B. Car or Cargo
or sell on commission.

The Woodstock Lumber Co.
131 State Street, Boston, Mass.

We
Pay
Cash

EDGINGS

Ontario

The ratepayers of Chatham, Ont., have defeated a by-law for bonusing, to the extent of \$12,000, the Saginaw Match Company, Saginaw, Mich., which proposed to erect a factory at Chatham, Ont.

The Northern Veneer Company, Limited, Grimsby, Ont., which was recently incorporated with capital stock of \$200,000, reports that it intends to manufacture veneer for the basket business.

The pulp mill of the Dryden Timber & Power Company, Dryden, Ont., will be closed for about two months while the installation of new machinery is being made. About \$100,000 will be spent on improvements to the plant.

The Keewatin Lumber Company, Keewatin, Ont., report that their operations in the woods will be on the same scale this winter as last. During the sawing season of 1912 this company cut 31,000,000 feet of lumber and 7,500,000 lath.

West & Jackson, whose sawmill at Englehart, Ont., was destroyed by fire on June 10th have built a new mill and have now had it in operation long enough to cut the balance of the logs that were not destroyed by fire. Additions will be made to the mill next spring, so as to increase its capacity.

John Harrison & Sons Company, Limited, lumber manufacturers, Owen Sound, Ont., report that they contemplate making the following changes in their plant this winter; a new carriage for the double cutting band mill at their plant at Algoma Station on the Soo branch of the C. P. R.; a new double cutting band, also log chain, for east side mill at Owen Sound; new picket machinery for west side mill at Owen Sound. The company's operations in the woods this winter will probably exceed those of last winter by 25 per cent.

Tenders are being received until January 12th for the purchase of Ontario timber license No. 194, for 1913 and 1914, on berth No. 2, Township of Proudfoot, concessions 1-8, having an area of 23¾ square miles. The property is believed to contain between fifteen and twenty million feet of merchantable timber, mostly hardwood. The license at present belongs to the estate of The Beaver Lumber Company, Kearney, Ont. Further particulars may be had from F. C. Clarkson, Assignee, 15 Wellington St. W., Toronto.

Eastern Canada

Caron & Raymond, sash and door manufacturers, Montreal, P.Q., have dissolved.

P. Portugais & Company, wood turners, Quebec, P.Q., recently suffered loss by fire, their plant being partly destroyed.

The Edward Partington Pulp and Paper Company has filed notice that its capital stock has been increased from \$950,000 to \$5,000,000.

The Wood Mosaic Flooring Company, Limited, Montreal, P.Q., recently suffered loss by fire, as a result of which their plant was partly destroyed.

The Partington Pulp and Paper Company have considerably enlarged their plant at St. John, N.B., and are now completing a new warehouse and conveyor to carry the pulp from the mill to the warehouse.

La Compagnie J. A. Gauvin, Limitee has been incorporated with a capital of \$49,000, to carry on business as furniture manufacturers, etc., with head office at Beauport, Que. The provisional directors are J. A. Gauvin and J. H. Fortier, both of St. Joseph de Levis.

At the sale by auction of the assets of Ernest Boyer, door and sash manufacturer, Chapleau Street, Montreal, the seven lots of land and the sash and door factory were sold to Mr. George C. Goodfellow, who also purchased the other effects at 54 cents on the dollar, making the total price \$15,500.

The Canadian Last Block Company, Limited, has been incorporated with a capital of \$50,000, to carry on business as shoe last manufacturers, with head office at Montreal, Que. The provisional directors are O. Dufresne, Maisonneuve, E. Robin, L. P. Delongchamps, J. Ouimet, of Montreal, Que., and A. Martel, of Iberville, Que.

La Compagnie de la Riviere Kiamika, Limitee, has been incorporated with a capital of \$25,000, to carry on business as lumber merchants, with head office at Val Barrette, Que. The provisional directors are O. Girard, Mont Laurier, Que., H. A. Chevrier, Val Barrette, Que., N. Page, Nominique, Que., J. B. Lafleur, Mont Laurier, and F. Charbonneau, Kiamika, Que.

The Trois Pistoles Pulp and Lumber Company, River Trois Pistoles, P.Q., report that they are increasing their engine and boiler power, replacing several parts of their machinery with modern improvements, building conveyors to take their products from the mills to the yards by steam power and making other general improvements to their plant, which will increase their output.

The limits belonging to the estate H. M. Price & Company, which were offered at auction by A. F. C. Ross and E. Trudel, joint curators, on December 17th were not sold. The stringency of the money market is understood to have prevented any one from bidding as much as the up-set price. The limits were located on the River St. Jean, River Saumon, River Magpie and River Chambers. The up-set price was \$135,000.

The auction sale of timber limits on the River St. John, River Salmon and River Chambers in Quebec Province recently held by Messrs. Pentland, Stuart, Gravel and Thomson, resulted in the sale of the property to Mr. D. Breakey. The limits included: Limit No. A, River St. John, 28 square miles; limit No. B, River St. John, 40 square miles; limit No. 2, Salmon River, 41 square miles; limit No. 3, Salmon River, 74 square miles, and a limit on the Rivers Chambers and Salmon, 77 square miles.

The Grand Falls Company, Limited, will soon commence work on the erection of large pulp and paper mills at Grand Falls on the St. John River, N.B., where immense power can be developed, and where it is proposed to build up a very extensive industry. Sir William Van Horne is associated with the enterprise. Various companies have secured rights and powers at different times with a view to development such as is now proposed, but for one reason

or another nothing practical was accomplished. The present company has ample capital, and during the past year engineers have been at work upon its plans.

A report from Sherbrooke, P.Q., reports that the Chaudiere Lumber Company, owned by Messrs. McCrea and Tobin, has been sold to Mr. John Breakey, of Quebec. The property consists of about 15,000 acres of timber lands, one-third of which the company owned is fee simple, and two-thirds the cuts of timber only, also the improvements at Chaudiere. The price is understood to have been about \$350,000. In addition, the purchasers take over all contracts for timber to be cut this winter, reimbursing Messrs. McCrea and Tobin for advances made and expenses. The Chaudiere Lumber Company was organized about seven years ago for handling pulpwood and ties.

Western Canada

J. S. Deschamps, of Rossland, B.C., has recommenced operations with the China Creek Lumber Company.

The North American Lumber & Supply Company, Limited, has opened branches at Driver, Springwater and Dodsland, Sask.

The Western Cedar Pole Company, Limited, has been incorporated with a capital of \$50,000, with head office at Calgary, Alta.

The D. Morton Company, Limited, has been incorporated with a capital of \$20,000, to carry on the business of lumber merchants, sawmill operators, etc., with head office at Victoria, B.C.

The Federal Cedar Mill Company, Limited, has been incorporated, with a capital of \$20,000, to carry on business as timber merchants and sawmill owners, with head office at Vancouver, B.C.

William Curry who recently returned from Vancouver, B.C., has purchased an interest in the Continental Lumber Company of River Charlo, N.B., and will become the manager of that branch of the business from the first of the new year.

The Eau Claire & Bow River Lumber Company, First Avenue West, Calgary, Alta., are reported to be considering a plan for developing power to the extent of 1,500 kw. The cost of the development will be about \$300,000 and will probably involve the installation of 2 gas driven units and 2 turbo-generators. It is proposed to start work upon this development in the spring of 1914.

Canadian Wood Preserving Company, Limited, has been incorporated with a capital of \$10,000, to carry on business as manufacturers of railroad ties, bridge timbers, etc., with head office at Winnipeg, Man. The provisional directors are W. Buckler, consulting engineer, W. S. Harris, A. E. Larkin, Minneapolis, U.S.A., P. C. Reilly, Indianapolis, U.S.A., and J. A. Smith, Winnipeg, Man.

Plans are on foot to form a pulp and paper combination out of the Ocean Falls, Crown Paper, of Portland, and Quatsino Pulp concerns. Ocean Falls, owned by British capitalists, is now closed down. San Francisco capitalists propose to guarantee 50 per cent. of the Ocean Falls bonds and will put up \$3,000,000 for a paper plant. London shareholders having agreed, and I. Hamilton Benn, M.P., is on his way to San Francisco to execute the agreement.

Two hundred and thirty-two acres of timber on Craycroft Island were sold by tender on November 21st by the government to the Vancouver Timber & Trading Company for 75 cents a thousand, plus the royalty. The timber is principally hemlock, and must be cut in two years. Application was made for the purchase of this land, but the government inspected it and found, after the first payment had been made, that it was regarded as timber land, namely, that it carried over 8,000 feet to the acre. All brush will have to be disposed of by the timber company so that the land will be left suitable for agricultural purposes.

Forty million feet of timber within the area to be flooded by the Canada Western Power Company, when it raises the dam at the outlet of Stave Lake, B.C., has been purchased by Messrs. Loughheed and Abernethy with mills at Port Haney and Eburne, B.C. This timber is all close to the water and will be logged directly into the lake and brought to the Fraser river at Ruskin over the Canada Power Company's railway from the lake to the river, and from this point it will be boomed and floated to the mills. The timber is said to be of first quality, and forms an easy logging proposition. It became necessary for the power company to dispose of the timber as the area on which it stands will be deep under water within a few years when the plans for trebling the present power production are carried out. It will take four or five years to remove the timber.

Trade Enquiries

The Dominion Government Trade and Commerce reports contain the following trade enquiries. Readers of the "Canada Lumberman" may obtain the names of enquirers by writing to the Department of Trade and Commerce and stating the number of the enquiry.

2240. Lumber, clear pine.—A South African importer asks for quotations on Canadian clear pine all sizes, planed four sides.

2241. Lumber, pine shelving.—Inquiry is made for quotations of Canadian pine shelving, quality 2, 1-inch x 12-inch by 12, 14 and 16 feet long.

2242. Lumber, poplar boards.—A South African importer asks for quotations on Canadian poplar boards $\frac{3}{8}$ -inch to 1-inch x 12, 14 and 16 feet long, planed four sides.

2259. Lumber and timber, all kinds.—A South African importer asks for quotations of all kinds of Canadian lumber and timber.

2268. Lumber.—Inquiry is made by a South African importer for quotations on poplar boards $\frac{1}{2}$ -inch and $\frac{3}{4}$ -inch planes, 12 to 16 feet long.

2269. Spruce deals.—An East London importer asks for quotations on Canadian 3-inch spruce deals.

2278. Carriage lumber.—A Durban firm asks, for quotations on Canadian poplar lumber planed on both sides to measure $\frac{1}{2}$, 5-6, $\frac{3}{4}$, $\frac{7}{8}$ x 12 to 15 inches wide and 14 to 16 feet long.

2321. Box shooks.—Quotations c.i.f. Durban are requested on different sizes box shooks.

SPRUCE

—that is—

SPRUCE

We have in stock and can ship quick

1 x 4	Mill Run
1 x 5	"
1 x 6	"
1 x 7	"
1 x 8	"
1 x 9	"
1 x 4/up	Culls
1 x 4/5	Sound Waney

The quality and manufacture will pay you try the stock.

Read Bros., Ltd.

Pine, Hemlock,
Spruce
and Hardwoods

Lumber and Lath
43 Victoria Street

Toronto, - Ont.

Have You A Copy

of Our Stock List?

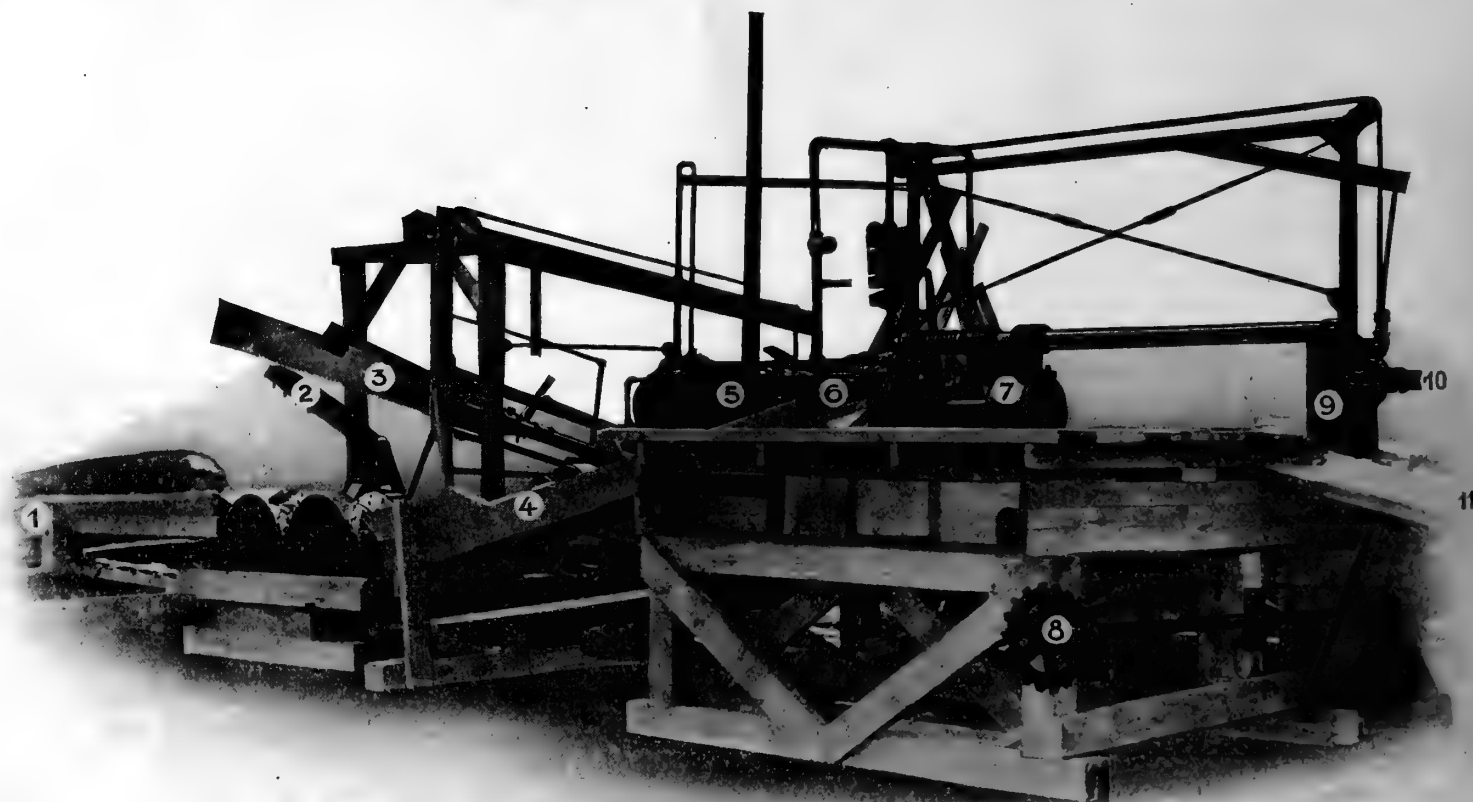
It includes some splendid
lots of lumber in

Red and White Pine
Spruce
Lumber and Timber

Thos. Mackarell & Co.

Montreal Ottawa

There is Big Money Cutting Cordwood



The Features of Kent's Cordwood Splitter

- 1 Conveyor of logs to saw.
- 2 Steam hold down.
- 3 Cut-off saw.
- 4 Conveyor from saw to splitter.
- 5 } Steam piston.
- 6 }
- 7 Steam head block.
- 8 Can be used as friction drive to carry wood out.
- 9 Vertical splitter.
- 10 Adjustable horizontal splitter.
- 11 Delivery table.

The new Kent Cordwood Splitter will turn small and rough timber, from which all logs suitable for lumber have been taken, into valuable cordwood. It will add millions of dollars to Canada's cut-over limits.

If you own or hold permits for any hardwood timber limits the Kent Cordwood Splitter can make big money for you. The machine is economical to operate and cheap to install.

The capacity of this invention has been demonstrated as 42 cords of 4 ft. cordwood per day of 10 hours with 11 men and one team. That means the timber cut, split and piled.

The cost of splitting hardwood has been reduced over 50 per cent. by this invention aside from the utilizing of timber that would be useless for any other purpose.

*This is an unusually interesting proposition—
we solicit your enquiries.*

Kent Cordwood Splitter Company

MEAFORD, ONTARIO

FIRE PREVENTION AND PROTECTION

LUMBER INSURANCE COMPANY OF NEW YORK

Our wide Experience with the Cause of Fires effecting Lumber and Woodworkers enables us to render Efficient Service in Reducing the Hazard in your Risk and also meet your requirements for the greatest Economy consistent with Safety

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201 McIntyre Block, WINNIPEG, MANITOBA

E. D. HARDY, Canadian Manager
24 Central Chambers, OTTAWA, ONTARIO

W. S. JELLIFF, Manager
505 Corbett Bldg., PORTLAND, OREGON



Why Atkins Saws Run Faster

There is a real reason why Atkins **Sterling Cross-Cut Saws** will run easier and cut faster than any other Saw. This reason is because they are **Segment Ground**. This is an exclusive patented process which consists of grinding the Saws the same thickness along their entire tooth edge and gradually tapering them **throughout the entire blade toward the centre on the back**. See illustration in lower right hand corner.

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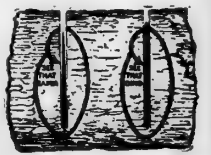
will actually run with less set than any other because the blades clear themselves. There are other reasons why you should use them. Write to us at either address below and we'll tell you all about it. Better still—send us a small order and prove to your own satisfaction that Atkins Sterling Saws will make money for you.

E. C. Atkins & Company

Makers of Sterling Saws

Factory: Hamilton, Ont.

Vancouver Branch, 109 Powell St.



Brake Your Load and Save Your Horses

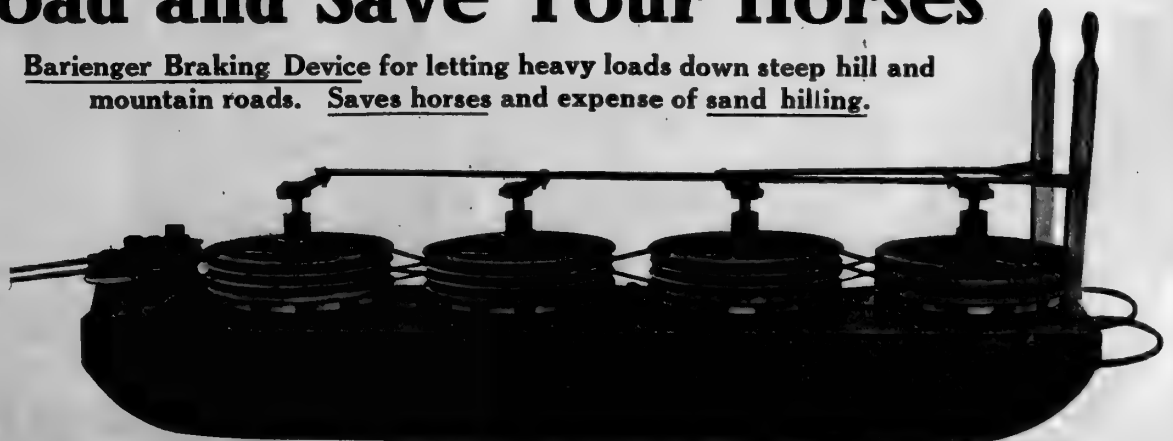
Besides avoiding accidents and eliminating sand hilling this braking device can greatly reduce your hauling costs. Larger loads may be handled and fewer men employed.

Barienger Braking Device for letting heavy loads down steep hill and mountain roads. Saves horses and expense of sand hilling.

Our catalogue fully explains

Ryther & Pringle Co.

Carthage, N. Y.



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Write for
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THE
MAIN
DRIVE

has for many years proven its service giving qualities. It is equally reliable for all direct drives whether straight or crossed. It has a good surface for gripping the pulley, runs true and exceptionally straight. It will pay you to investigate this long lived dependable belt. Write for booklet—"The Main Drive."

Federal Engineering Co., Limited, TORONTO, MONTREAL

The Three Goodhue Belts

"EXTRA" "STANDARD" "ACME WATERPROOF"

These three brands are made for three different services and each brand is the best quality made from selected hides with the stretch taken out.

"Goodhue Belts" stretch less than any other belt by 15 to 25 per cent. This quality effects a great saving because it is unnecessary to be continually shortening the belt to keep it taut.

"Acme Waterproof" brand is made for the wet places in a mill and will give a remarkable service under the most trying conditions.

When you buy a belt—buy a Goodhue. Prices and particulars on request.



J. L. Goodhue Company Limited
DANVILLE - QUEBEC

GET 20 PER CENT. MORE LUMBER FROM YOUR LOGS

by using our

Patent Steel Band Mill and Carriage

Results from logs of given dimensions cut on Breeze, Denison & Co. pat. band mill.

Diam.	Log Length	Feet Lum.
8 in.	16 ft.	45
10	12	54
10	16	69
11	15	96
14	16	171

This result was attained by different users of our mills during the season of 1912. We can prove to your satisfaction that this mill will cut more lumber and superior lumber than any other Band or Circular Mill on the market.

Special features of Mill

Concrete foundation not necessary. Frame constructed with brace bolted to same timbers which support base of mill. This prevents any movement of mill foundation throwing mill arbors out of cross line. Supporting timbers attached to track which prevents variation in cutting of boards.

Roller Bearing Carriage

designed to do away with lost side motion which is quite necessary for successful work in double cutting bands.

Double Action Friction Set Works

working on thin steel disc, which can be successfully used in place of usual foot friction in receding knees. This cuts down weight in pinion shaft, therefore reducing momentum, so that it is beyond speed of setter to over set by rapid work. Carriage can be changed from high to low speed instantly and can be operated without passing saw more than six inches either way. Knee opening to 44 inches.

Guide prevents any binding motion to the gip and will automatically raise when coming in contact with knot in timber. Guides adjustable when mill is running.

A Canadian Built Mill of superior manufacture.

Write us if interested

Manufacturers of
Patented Steel Roller Bearings, Sawmill Carriages;
Steel Band Mills, Portable and Stationary,
for 16 to 19 Gauge Saws; Automatic
Filing Machines (Swages)

BREEZE, DENISON & COMPANY

Newburgh, Ontario

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

• Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

Are your horses of use to you?

This seems an absurd question—and the answer is always
"Of course they are"—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	\$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic	
1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz.

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.
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Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.

Are Your Horses in Good Condition?

Horses for all lumber work are subjected to the hardest hauling under the most severe conditions. They should therefore be as fit as all possible care and attention can make them.



**In the Lumber Camp,
Around the Mill, In the Yard**

and wherever lumber has to be hauled the horses are always liable to a multitude of small injuries which if not attended to promptly may develop into lameness or disfigurement, thus reducing the working capacity of the horse and impairing its value from a sale standpoint.

You should always have handy and ready for use

Good Liniment

to reduce bruises, strains, soreness; allay pain and inflammation quickly, be an antiseptic dressing to a cut or burn, or to heal a wire cut, wound or laceration.

ABSORBINE

is an antiseptic healing preparation as well as a resolvent and a discutient. It will assist nature in bringing about a dissolution of the bunch, restore the circulation, gradually restoring the part to its normal condition.

It will produce permanent and complete results without blistering or removing the hair, and will leave no blemish. You can work the horse at the same time.

All enquiries on special cases answered without delay—full information and instruction on request. Absorbine \$2.00 per bottle at dealers or express prepaid. Manufactured only by

W. F. Young P. D. F.

424 Lyman's Bldg.

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MONTREAL, CANADA

Inserted Tooth Circular Saws

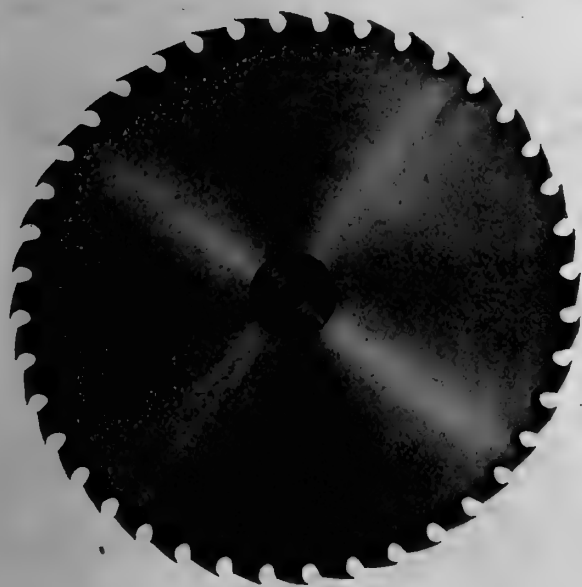
All Radcliff insert tooth saws are fitted with the world famed Hoe Bits and Shanks.

The body steel is tempered to the highest degree of perfection with sufficient pliability to avoid breakage.

We manufacture a complete line of high grade solid tooth saws, rift saws, shingle and heading saws, grooving saws, mitre saws, wide and narrow band saws, mill saws, drag saws, gang saws, cross cut saws and machine knives.

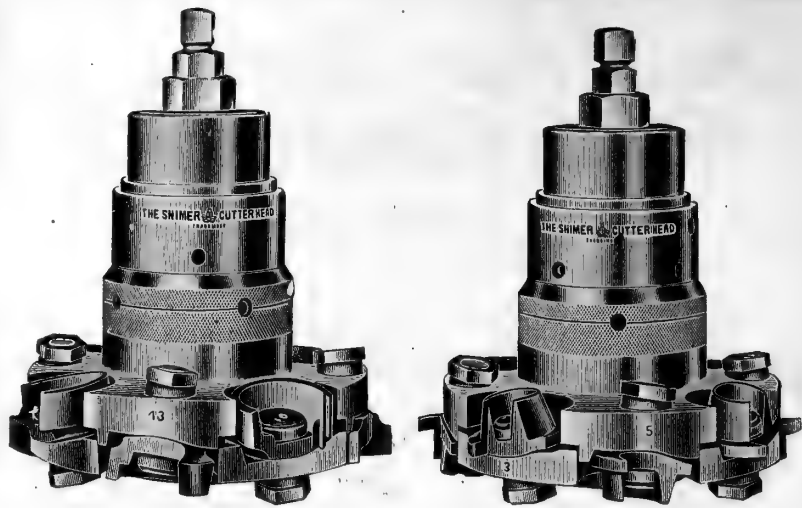
Send for our catalogue and prices.

Radcliff Saw Mfg. Co.
TORONTO Limited



"The
Saw
With
The
Keen
And
Lasting
Edge"





The Shimer "Limited" Cutter Heads

For The High Speed Matcher

These Heads will increase your matching capacity to 170 feet or more per minute, lighten your labors and reduce your expense account.

They work smoother and cut true to pattern. No fitting, no trying—no filing or grinding to shape.

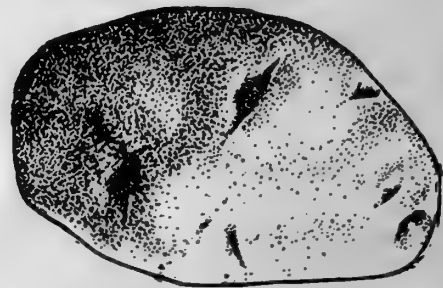
Everybody profits by their use.

Price, net, for Flooring, \$72.46 the set complete like illustrations. In Solid Section \$67.00 complete.

Samuel J. Shimer & Sons

GALT, ONT., CAN.

Annihilate Scale



Potato Scale will positively remove scale from your boiler tubes and can do no injury to your pipes or fittings. Feed water should be regularly treated with Potato Scale to prevent scale, pitting, grooving and honeycombing; it saves fuel and so treats the water that it absorbs more steam.

Send us a gallon of feed water which we will analyze and then mix a sample of potato scale to suit your conditions—this is a free trial, write us.

C. C. Snowdon

Box 1384

Calgary, Alta.

Lumber Camp Ranges and Heaters

Our stoves are specially designed to meet all requirements of camp work.

We know exactly what is necessary and desirable in this class of stove.

We put into all our stoves the best of material and workmanship coupled with the best of expert experience.

The 'Leader Range' for coal and wood, shown in this cut is specially adapted to Lumberman Camps, Boarding Houses, Hotels and Railroad Construction Camp Work. We also make this Range with side hinge doors.

It is large, heavy and strongly built. Has good oven space and large heating surface. When a good, solid, reliable stove is wanted the 'Leader' will give satisfaction.

Write for our catalogue.

**All Kinds of Stoves for
Large or Small Camps**



NO. 10-36A SIX HOLE LEADER RANGE AND RESERVOIR

ADAM HALL, Limited

Manufacturers of Ranges, Heaters, etc., for Lumber Camps, Hotels, and Railway Construction

Peterborough, Ontario

ENGINES and BOILERS

OF ALL TYPES AND SIZES

HEATERS, STACKS, RETORTS, TANKS

We cater specially to the lumbering industries

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WINNIPEG, MAN. CALGARY, ALTA. VANCOUVER, B.C.



Locomotive Boiler on Skids

WE CAN

DOUBLE

THE CAPACITY OF YOUR
DRY KILN

GRAND RAPIDS VENEER WORKS

Dry Kiln Service

MEANS
TO
YOU

A Practical Theory
Competent Engineering
Effective Organization
Years of Experience
Guaranteed Results

Grand Rapids Veneer Works

Grand Rapids,
Michigan

Modern Planing Mills

Use
**SHELDONS
EXHAUST
FANS**



See for yourself what our **Exhausters** will do for you in your particular plant. We guarantee our workmanship and reasonable prices.

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Robert Hamilton & Co., Bank of Ottawa Bldg. Vancouver
Grose & Walker, 250 Stanley St. Winnipeg



Griplock Riveted Chain Belt



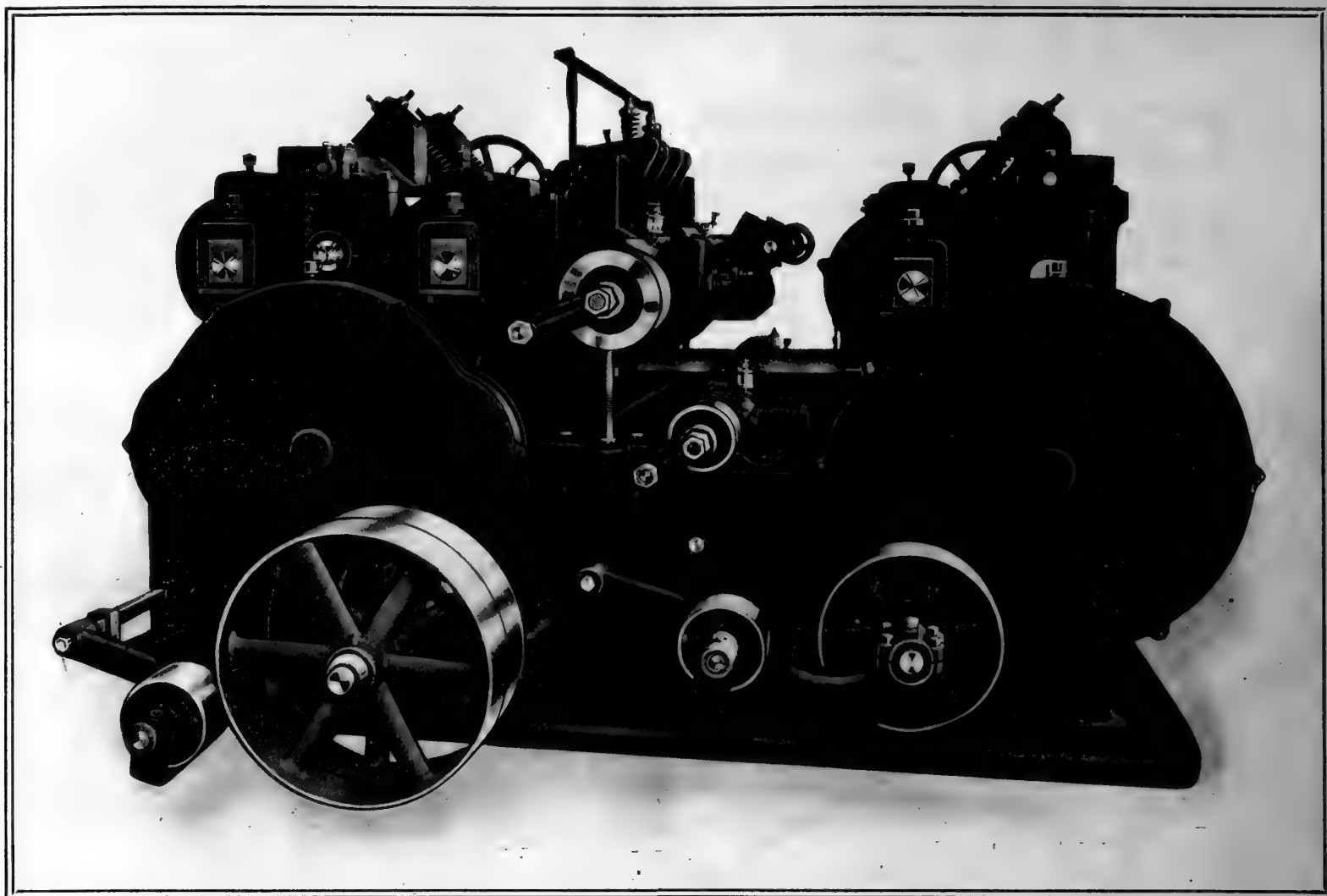
Section of Griplock Riveted

No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis.; a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

We would be very glad to mail you sample links for your inspection.

Sold by **The A. M. ELLICOTT CO., Montreal, Que.**
Elevating, Conveying and Transmission of all kinds a specialty



A silent drive proves the mechanical perfection of the **FAY-EGAN** "LIGHTNING" 336 Fast Feed Surfacer

Fay-Egan Surfacers are gear driven—not by crunching, rattling, power consuming and ever breaking gears with which you may have had some sad experience—but with large wide-faced gears, cut from the solid, with rolling contacts and perfect mesh, running in tight cases filled with grease.

The drive of a "336" is perfectly noiseless—the silence that proves mechanical perfection—the perfection that means great driving force with small power consumption and an entire absence of shut-downs and expense on account of broken gears.

This is but one of several reasons why Fay-Egan "Lightning" Surfacers and Matchers are proving so popular; and by the way we are equipping all late models of our machines with cut gears exclusively.

Once you know from actual experience the real value of cut gear drive you will have no other type on your Matchers and Surfacers.

You get cut gear drive now as regular equipment on Fay-Egan "Lightning" Surfacers and Matchers and Moulders.

Before you buy another machine of this type, investigate the new silent drives.

Book on Fast Feed Matchers and Surfacers Free on Request — Ask for No. 87.

J. A. FAY & EGAN CO.

465-485 W. Front St., Cincinnati, Ohio, U. S. A.



No Mountain Pass too Steep for
the Horse shod with

Red Tip Calks

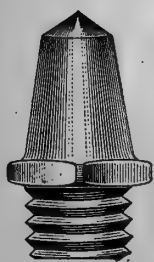
Nowhere are surefooted horses more necessary than in the dangerous mountain passes and steep slippery hills encountered daily by the lumberman.

Red Tip Horseshoe Calks

here prove their value, and their cost is but a slight premium to pay as Horse Insurance.

The horse shod with Red Tip Calked Shoes is fearless and capable and can do the work required of him without danger to life or limb.

**Ask your horseshoer
or send for Booklet 4**



**The Neverslip Mfg.
Company**

Canadian Office 559 Pius IX Ave.,
Montreal

Factories { New Brunswick, N. J.
Montreal, Canada



You Are Deceiving Yourself If You're Using Ordinary Pipe Coverings

The mere fact that your steam pipes are covered doesn't necessarily mean that you have eliminated waste of steam by condensation. If you're using ordinary pipe covering you are still losing considerable steam—hundreds, perhaps thousands of dollars' worth annually.

Such an expenditure is a constant expense, as the very construction and composition of ordinary pipe coverings render maximum efficiency impossible. At their best they allow from one-quarter to one-half of the fuel consumed to become wasted by radiation and condensation. And in a comparatively short time they become absolutely worthless.

J-M ASBESTO-SPONGE FELTED PIPE COVERING

positively prevents this waste of steam. Its presence is a guarantee that every pound of fuel consumed is delivering the maximum quantity of steam. It carries steam a mile with practically no loss.

J-M Asbesto-Sponge Felted Pipe Covering is the most efficient covering on the market because it confines the greatest number of dead air cells. It is made of pure Asbestos Fibres and finely ground sponge. It is practically indestructible and retains its insulating value indefinitely.

It has been found in perfect condition after more than 15 years' service on underground pipes.

Take the first step toward steam-plant efficiency by writing our nearest Branch today for copy of interesting booklet.

**THE CANADIAN
H. W. JOHNS-MANVILLE CO., Ltd.**

Manufacturers of
Asbestos Roofings; Pipe
Coverings; Packings;
Brake Lining;

TRADE
ASBESTOS
MARK

Boiler Preservative;
Fire Extinguishers;
Cold Water Paint;
Etc.

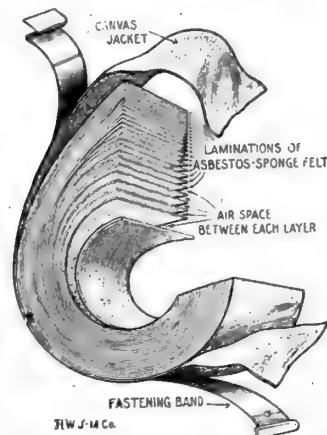
TORONTO

MONTREAL

WINNIPEG

VANCOUVER

1530



Steam Press

THE American steam press is carefully designed and substantially built of steel. It is used for baling shavings, asbestos and many other materials.

The cylinder is 30" diameter by 45" high and the pressure maintained is from 60 to 100 lbs. according to the amount of material wanted in each bale.

*For literature and
prices — write us.*

American Engine & Boiler Works

JOHN MAHAR, Proprietor
Tonawanda, N. Y.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	\$55 00	57 00
1½ inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	45 00
5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	38 00	38 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
4/4 No. 3 cuts	28 00	28 00
5/4 and 6/4 No. 3 cuts	32 00	32 00
8/4 No. 3 cuts	33 00	33 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
1 x 10 and 12 mill cull stocks	24 00	24 00
1-in. mill cull sidings	22 00	22 00
5/4 and 6/4 x 4 m.r., m.c. out	26 00	26 00
5/4 and 6/4 x 5 m.r., m.c. out	26 00	26 00
5/4 and 6/4 x 6 m.r., m.c. out	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out	36 00	36 00
2 x 10 common	28 00	28 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1½-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill culls	20 00	20 00
Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16 ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 00	24 00
2x4 to 12-in., 12 and 14 ft.	24 00	24 00
2x4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 20 ft.	28 00	28 00
2 x 4 to 12-in., 22 ft.	27 00	27 00
2 x 4 to 12-in., 18 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00	34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 18x18, 20x20, up to 32 ft.	34 50	34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00	35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 50	35 50
10x20, up to 32 ft.	36 00	36 00
6x18, 8x18, up to 32 ft.	36 50	36 50
6x20, 8x20, up to 32 ft.	37 50	37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	44 50
No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1½, 1½ and 2-in. Fir rough	47 00	47 00
1½-in. No. 1 4-ft. pine lath	4 50	4 50
1½-in. No. 2 4-ft. lath	4 20	4 20
1½-in. 32-in. pine	1 60	1 60
1½-in. No. 1 4-ft. hemlock lath	3 75	3 75
1½-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XXX B. C. cedar shingles	2 25	2 25
XXX 6 butts to 2-in.	3 20	3 20
XXXX 6 to 23-18-in.	3 40	3 40
XXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	60 00
Ash, white, No. 1 common	45 00	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	39 00	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	39 00	39 00
Birch, No. 1, com. and bet., 4/4	33 00	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, No. 2 and 3, common	18 50	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nds, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, plain, 1st and 2nds, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1½ and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00	88 00
White oak, ¼ cut No. 1 common	55 00	55 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$53 00	55 00
1½-in. & 1½-in. x 8-in. & up	56 00	60 00
2-in. x 7-in. and up	58 00	65 00
No. 2 cuts 2 x 8-in. and up	40 00	45 00
Pine good strips:		
1-in.	40 00	42 00
1½-in. and 1½-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1½-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	33 00
Pine, s.c. strips 1½	20 00	22 00
1½, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00	25 00
Pine, box boards:		
1"x4" and up 6'-11'	16 00	18 00
1"x3" to 6", 12'-16'	17 00	19 00
Pine mill culls, strips and sidings:		
1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	16 00	18 00
O. culls r & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16'	22 00	24 00
1½"x7"-8-9" and up, 12'-16'	22 00	24 00
1½"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)		
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out		
Basswood log run mill culls out	20 00	22 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.		
Ash, black, log run	20 00	24 00
1 x 10 No. 1 barn	25 00	28 00
1 x 10 No. 2 barn	33 00	36 00
1 x 8 and 9 No. 2 barn	23 00	26 00
Lath per M:	22 00	23 00
No. 1 white pine 1½-in. x 4-ft.	4 00	4 35
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 00	3 25
Red pine mill run	3 25	3 60
Hemlock, mill run	2 75	3 00
32-in. lath	1 80	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	75	75
Oak—Michigan and Ohio		
By the dram, according to average and quality	65	72
Elm		
By the dram, according to average and quality, 40 to 45 feet	80	90

By the dram, according to average and quality, 30 to 35 feet	60	65
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	25	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	\$20 00	21 00
Oddments	17 00	18 00
Boards, 1 and 2 in.	16 00	18 00

Birch Planks

1 to 4 in.	17 00	19 00
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SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	\$54 00	
1 in., 8 in. and up wide	62 00	
1½ and 1½ in. and up wide	65 00	
2 in. and up wide	70 00	

Cuts and Better

4/4 x 8 and up No. 1 and better	55 00	
6/4 x 8 and up No. 1 and better	65 00	
8/4 x 8 and up No. 1 and better	65 00	
6/4 x 6 and up No. 2 and better	52 00	
8/4 x 6 and up No. 2 and better	54 00	
6/4 x 6 and up No. 3 and better	46 00	
8/4 x 6 and up No. 3 and better	50 00	

No. 1 Cuts

1 in., 8 in. and up wide	42 00	
1½ in., 8 in. and up wide	55 00	
1½ in., 8 in. and up wide	57 00	
2 in., 8 in. and up wide	60 00	
2½ and 3 and 8 in. and up wide	75 00	
4 in., 8 in. and up wide	85 00	

No. 2 Cuts

1 in., 6 in. and up wide	31 00	
1½ in., 6 in. and up wide	42 00	
1½ in., 6 in. and up wide	44 00	
2 in., 6 in. and up wide	47 00	
2½, 3 and 4 in., 6 in. and up wide	62 00	65 00

No. 3 Cuts

1 in., 6 in. and up wide	24 00	
1½ and 1½ in., 6 in. and up wide	33 00	
2 in., 6 in. and up wide	33 00	
2½, 3 and 4 in., 6 in. and up wide	43 00	48 00

Common and Dressing Mill Run

1-in. x 4-in.	24 00	
1-in. x 5-in.	25 00	
1-in. x 6-in.	26 00	
1-in. x 8-in.	27 00	
1-in. x 10-in.	29 00	
1-in. x 12-in.	34 00	
1 in. x 13 in. and up	34 00	
1½, 1½ and 2-in.	30 00	

No. 1 Barn

1 inch	31 00	45 00
1½, 1½ and 2-in.	36 00	45 00
2½ and 3-in.	45 00	
4 inch	50 00	

No. 2 Barn

1 inch	28 00	36 00
1½, 1½ and 2-in.	30 00	36 00
2½ and 3-in.	38 00	

No. 3 Barn



These are the Largest Veneer Knives Ever Made

as far as we know. They are 205 inches in length, and when compared to small knife in center which is a regular 24-inch Planer Knife, it will be seen how exceptionally large they are.

They are made of our special lock-weld steel which is absolutely guaranteed not to pull apart. Holes are drilled—not punched. This assures knife fitting machine without adjustment.

All Disston Machine Knives are evenly tempered, and ground to micrometer gauge.

We can fill any machine knife order you give us.

Send for the Disston Machine Knife Book. It is full of valuable information and is mailed free.



Reg. U. S. Pat. Off.

Henry Disston & Sons
Limited

Keystone Saw, Tool, Steel and File Works

TORONTO, CANADA

Branch at Vancouver, B.C.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 37	23 - 27	17 - 20
5/4 to 8/4	36 - 40	25 - 30	17 - 20
10/4 to 12/4	45 - 48	35 - 38	22 - 25
16/4	49 - 52	39 - 42	

BIRCH			
4/4	38 - 40	28 - 30	18 - 20
5/4 to 8/4	39 - 42	29 - 32	19 - 23

SOFT ELM			
4/4	40 - 42	30 - 32	20 - 22
5/4 to 8/4	42 - 44	32 - 34	
10/4 to 16/4	44 - 46	34 - 26	

BASSWOOD			
4/4	40 - 42	30 - 32	20 - 22
5/4 to 8/4	43 - 45	32 - 35	23 - 25

OAK			
4/4	58 - 62	36 - 40	22 - 28
5/4 to 8/4	60 - 64	38 - 42	24 - 30

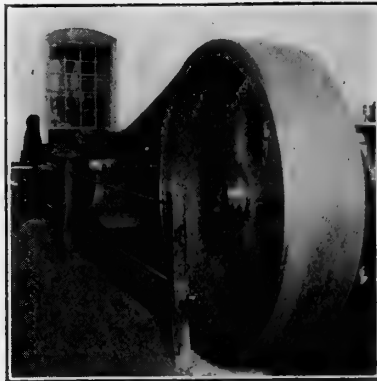
ASH, WHITE AND BROWN			
4/4	48 - 52	32 - 34	22 - 26
5/4 to 8/4	60 - 65	38 - 40	
10/4 and up	77 - 80	55 - 60	

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	98 00	100 00	
Selects, 1 to 2 inch	88 00	90 00	
Fine common, 1 in.	70 00	72 00	
Fine common, 1 1/4 to 2 in.	72 00	74 00	
No. 1 Cuts 1 in.	67 00	67 00	
No. 1 Cuts 1 1/4 to 2 in.	64 00	68 00	

No. 2 Cuts, 1 in.	40 00	1 1/4-in. spruce laths	4 35
No. 2 Cuts, 1 1/4 to 2 in.	48 00	1 1/2-in. spruce laths	3 30
Barn Boards, No. 1, 1 x 12	48 00		
No. 1, 1 x 10	38 00	New Brunswick Cedar Shingles	
No. 1, 1 x 8	37 00	Extras	3 55
No. 2, 1 x 12	40 00	Clears	3 30
No. 2, 1 x 10	35 00	Second clears	2 75
No. 2, 1 x 8	34 00	Clear whites	2 65
No. 3, 1 x 12	32 00	Extra 1s (Clear whites out)	1 50
No. 3, 1 x 10	29 00	Extra 1s (Clear whites in)	1 00
No. 3, 1 x 8	29 00	Red Cedar Extras, 16-in. 5 butts	
Canadian spruce boards	25 00	to 2-in.	3 65
Spruce, 10 & 12 in. dimension	28 00	Red Cedar Eureka, 18-inch	
Spruce, 9 in. and under dimen.	26 00	5 butts to 2-in.	4 25
Spruce, 8 in. and under dimen.	26 00	Red Cedar Perfection, 5 butts	
10 and 12 in. random lengths,		to 2 1/4	4 80
10 ft. and up	26 00	Washington 16-in. 5 butts to 2-in. extra red clear	3 60
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4 c. per ft. All F.O.B. Jamestown, New York.	
All other random lengths, 7-in. and under, 10 ft. and up	21 00		
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00		
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00		

Cling-Surface Does It.

The belt in this photograph is 3-ply; it is transmitting 220 horse power; is under a tension of over 1445 pounds on the pulling side; and yet THE TOP SIDE RUNS SLACK.



When this belt was photographed (in the plant of the Wilkes-Barre Light Co., Wilkes-Barre, Pa.), it was pulling 220 horse power. Looks as though it were pulling nothing, doesn't it? Increase the load to 268 h.p., the rated capacity of the generator, or even higher, and it will act equally well—Makes no difference to a Cling-Surface-treated belt—the greater the load the further it lies down on the pulley and pulls, for it is the contact that counts. Treated with Cling-Surface a belt can't slip, especially if it is provided with a fairly liberal arc of pulley contact as above.

The belt isn't made the least bit sticky, but rendered pliable and slipless by the penetrating and lubricating action of Cling-Surface.

But coming back to the Wilkes-Barre plant above, the speed of the fly wheel is 240 r.p.m. and its diameter is 80 inches. The generator is 200 kw., 3-phase, 2300 volt, 60 cycle, and its pulley is 32 inches in diameter. Distance between centres, 24 ft. When the belt was new it was not treated for three months. It became oily and dirty and began slipping. Even the tightener would not prevent slip. Then Cling-Surface treatment began, and they write, "Followed Cling-Surface instructions on first application and since then gave an occasional application with brush. Result—no trouble whatever on account of belting." We have thousands of installations doing equally well.

Send your trial order now. We quote f.o.b. Toronto.



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"Good Horse Sense" Is To Feed Him National Oats

Sixty Elevators

Located in the best oat-growing sections of Manitoba, Saskatchewan and Alberta, assure selected quality.

Good oats well sacked produce results at your camp.

Send post card or wire for quotations to

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"AJAX" Loading Chain

WELD:



Sectional view showing comparative size of weld and chain.

Experience has taught us that a good chain cannot be made from cheap material. In Ajax chains you get the best steel obtainable and every weld guaranteed. Ajax chain is guaranteed to pull stiff before breaking.

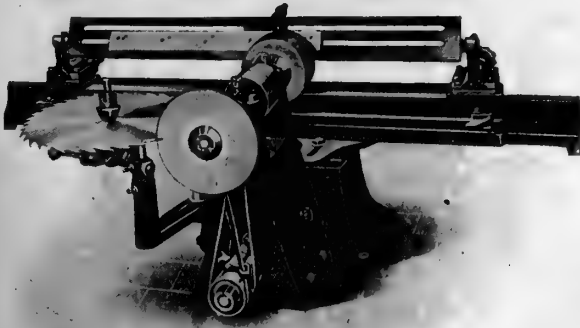
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Standard Chain Company, Pittsburgh, Pa.

MONTREAL—Alexander Gibb, St. Nicholas Bldg.

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Automatic Knife Grinder and Saw Gummer

This combination machine will be a valuable addition to your plant and will pay for itself in a short time.

This is one of the many Automatic Knife Grinders and Saw Sharpeners manufactured by us.

Write for our complete catalog—it is yours for the asking.

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.

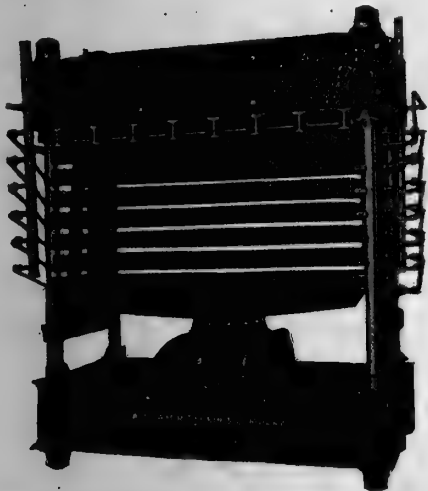
**Dixon's Solid Belt Dressing**

Belt slippage means loss of power and wear of Belts.

Slippage is prevented and wear minimized by the use of Dixon's Solid Belt Dressing. It is cleanly—easily applied while the belt is running—increases the adhesiveness without causing stickiness—contains no injurious elements.

Write for "The Proper Care of Belts", No. 238.

Made in JERSEY CITY, N.J. by The
Joseph Dixon Crucible Company
Established 1827

**Veneer Press and Dryer**

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

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William R. Perrin and Company, Ltd.
TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

The Laidlaw Bale-Tie Co., Limited

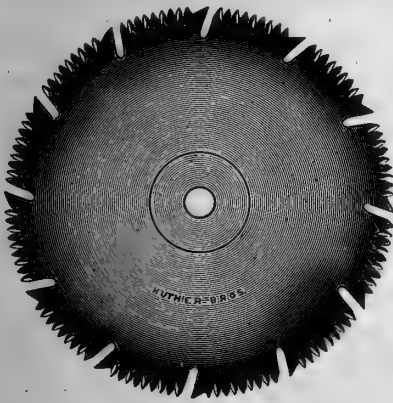
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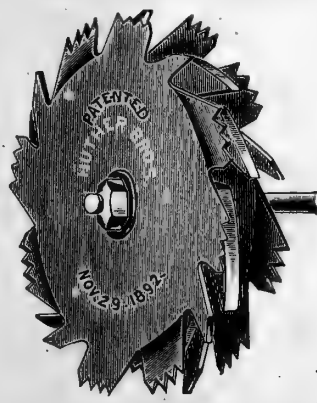
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HUTHER BROS.
Hollow Ground Combination Tooth Mitre Saw

Patent Groover or Dado Head

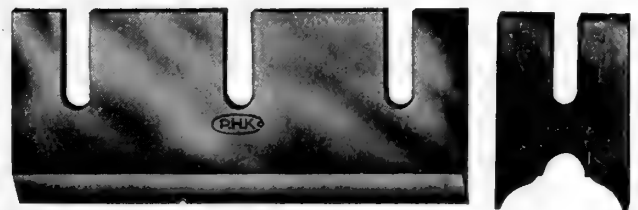


For either Rip or Cross Cutting
Will cut equally as smooth in either Ripping, Cross-cutting or cutting at an angle of 45 degrees, with grain of wood.



Can be used on any Circular Saw Mandrel
For cutting any width groove from 1/8" to 2" wide. Will cut either with or across the grain (Sent on approval).

Allow us to quote Prices on Saws for any special work that you wish to do.
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Machine Knives, Circular Cutters and Mortise Chisel**Boss Line Lumbering Tools**

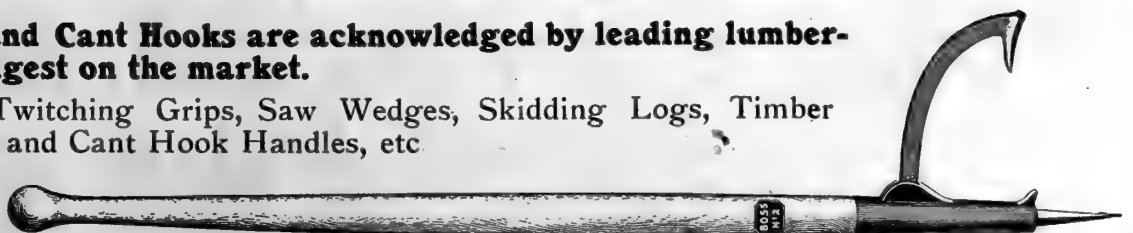
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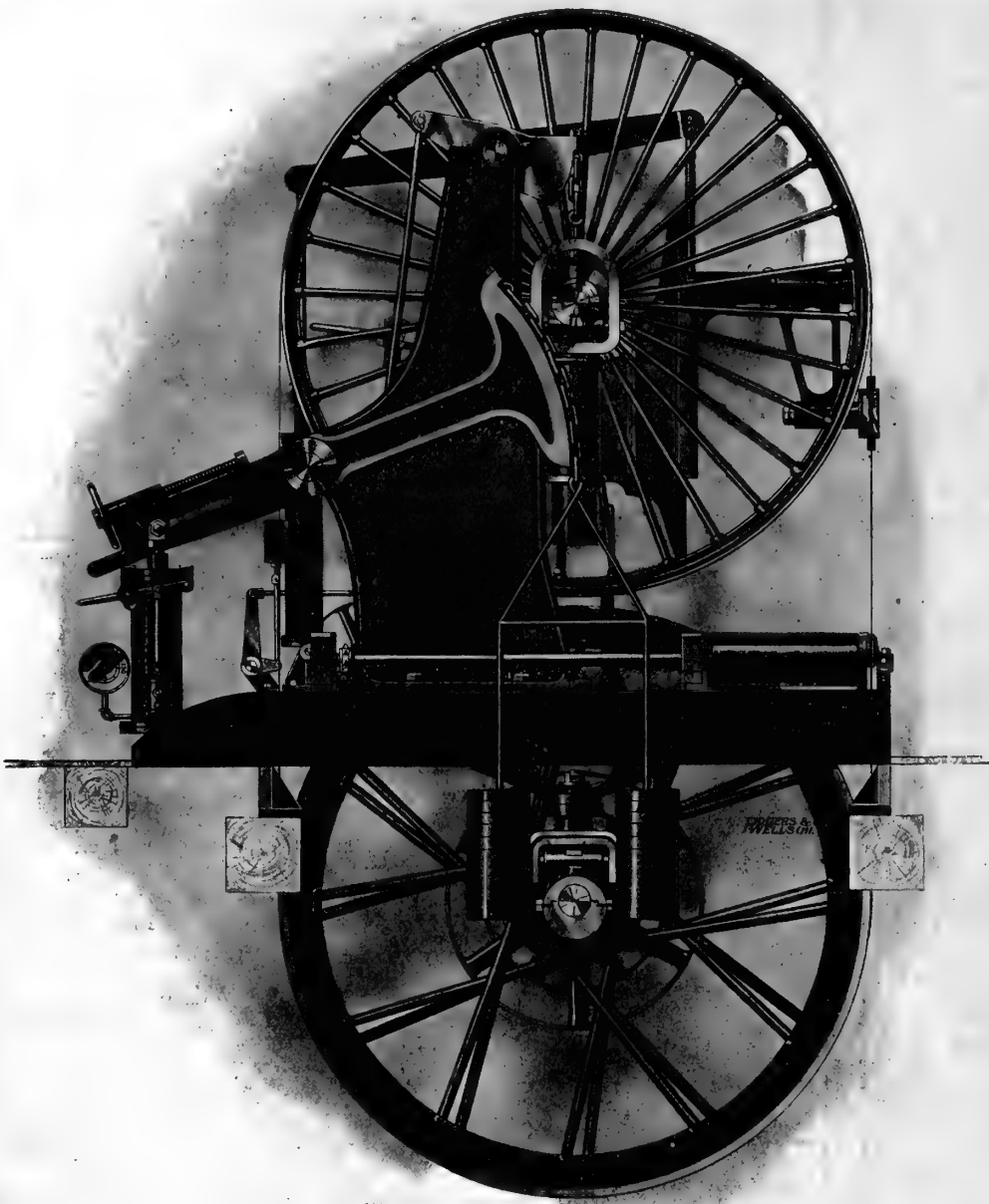
The McFarlane-Neill Mfg. Co., Ltd., St. Mary's, N. B.

Forged Steel Socket Peaveys and Cant Hooks are acknowledged by leading lumbermen to be the lightest and strongest on the market.

Try our Steel Loading Blocks, Twitching Grips, Saw Wedges, Skidding Logs, Timber Carriers, Split Rock Maple Peavey and Cant Hook Handles, etc.

Catalogues furnished and prices quoted on application





The Steam Tension Band Mill

THE top guide on this mill, as well as the upper wheel, is operated by a steam cylinder.

This means that the guide can be moved up or down instantaneously, which in one day's work means quite a saving of time over the ordinary mill. This goes a long way towards paying for the mill by the end of a year.

But this is not all—with this steam operated guide it is just as easy to keep the guide close to the cut as it is to set it for certain size logs and keep it

there. This can be done without loss of time, and so by bringing the guide down close to the cut, vibration of the saw is done away with and the quality of the lumber is improved.

No form of tension yet devised is as easy on the saws as the steam tension—several of the users of this mill have run through an entire season without cracking a single saw.

These are some of the reasons why our steam tension band mill is the most economical mill to buy, and there are others which you will find in our catalogue.

When you are tuning up your mill this winter for next season's operations, remember that we can serve you promptly whatever your requirements may be.

William Hamilton Company, Limited

PETERBOROUGH, ONTARIO



Facts and Figures

IF facts, figures and A to Z guarantee are worth learning about it will pay you to write our nearest house. They will explain the Leviathan plan that sells you "BELTING SERVICE," 100 per cent efficient.

Main Belting Company

of Canada, Limited

MONTREAL

CANADA

24 Wellington St. West, TORONTO

A Be Sees of Values

**Population Regulates Demand,
Demand Regulates Price,
Price Regulates Profit.**

When forty acres of forest are converted into a field a source of timber supply is forever eliminated, and

A forever addition to demand takes its place.

Settlement, therefore, influences values in two ways: Lessening the supply and increasing the demand.

This country is being settled very rapidly and the result has been and will be steady and sure gains in timber values.

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Morgan Machine Company

ROCHESTER, N. Y.

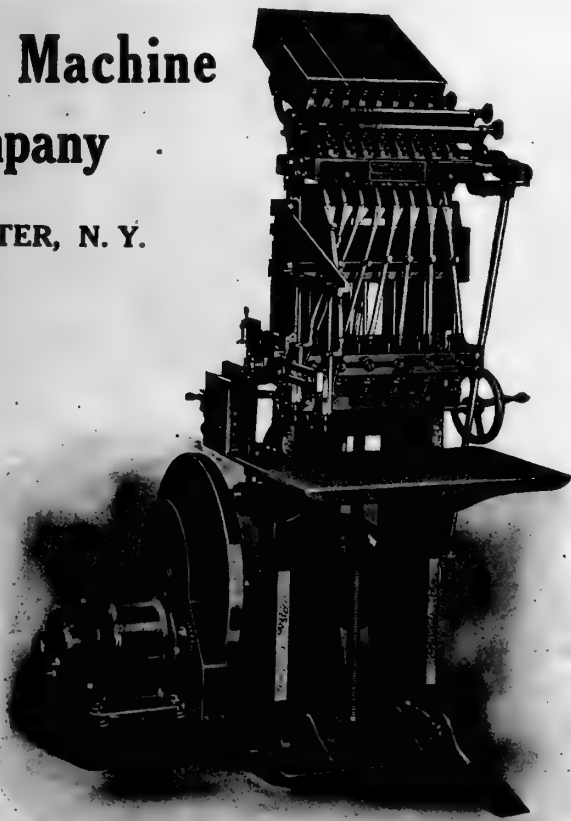
Manufacturers
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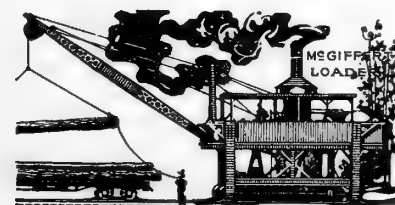
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Matchers,

Box Board
Printing
Machines.

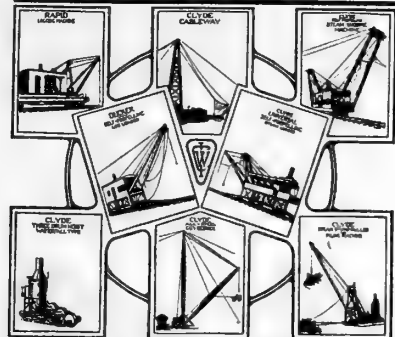


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.

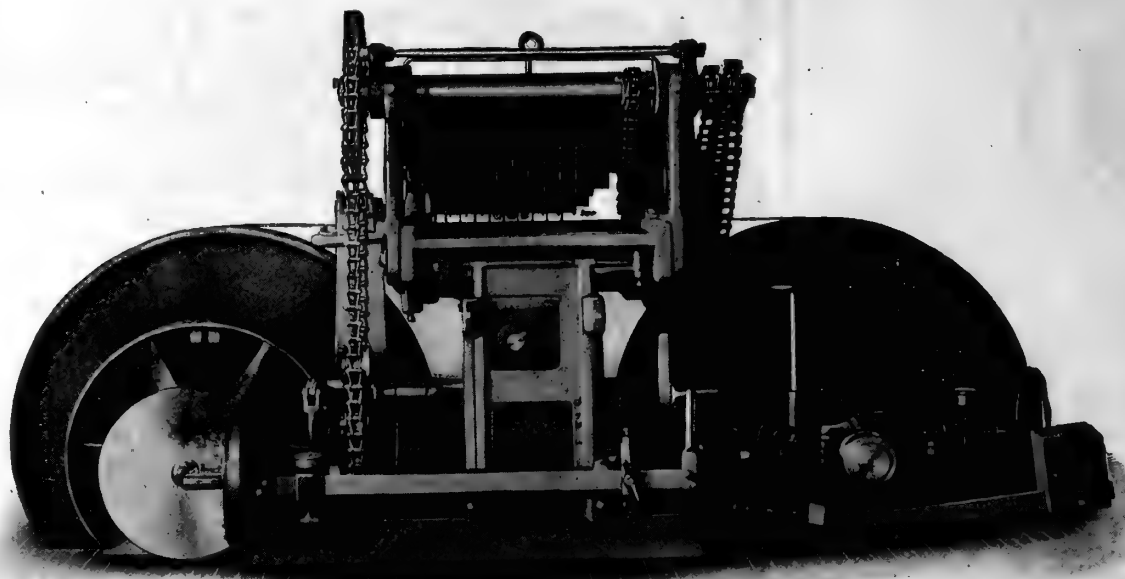


**A Machine for
every logging
operation**



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

LOGGING LOCOMOTIVES



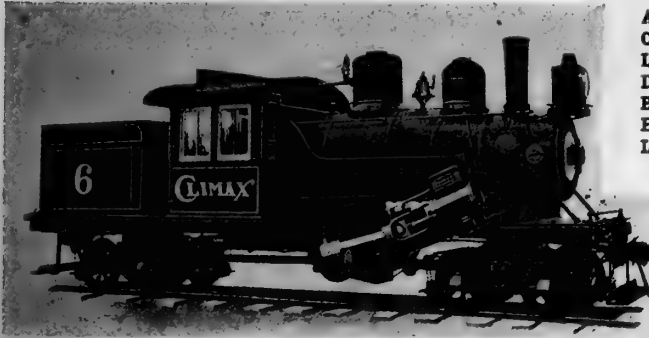
The locomotive illustrated was built for MacKenzie, Mann & Co., Contractors, Montreal, Canada, and represents the latest development in this type of locomotive.

It is suitable for logging contractors, quarries, mines and industrial service. It will haul 1,875 tons on level, and 160 tons on 3 per cent. grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."
CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

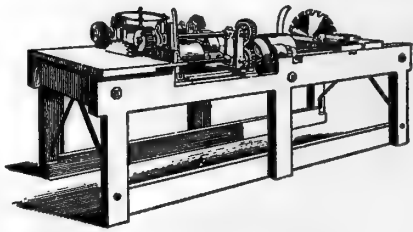
**A Reliable Engine in the Woods**

In logging operations the scene of activity is often many miles from repair facilities so the wise lumberman will appreciate the importance of a reliable locomotive. Our locomotives are built with this fact in view. They are sturdily and simply constructed and will give continual service all year round.

Logging and industrial locomotives are a specialty with us. We are prepared to construct any special types or submit specifications.

If you are in the market we will be pleased to hear from you.

Canadian Locomotive Company, Limited, Kingston



"Superior" Lath Machine

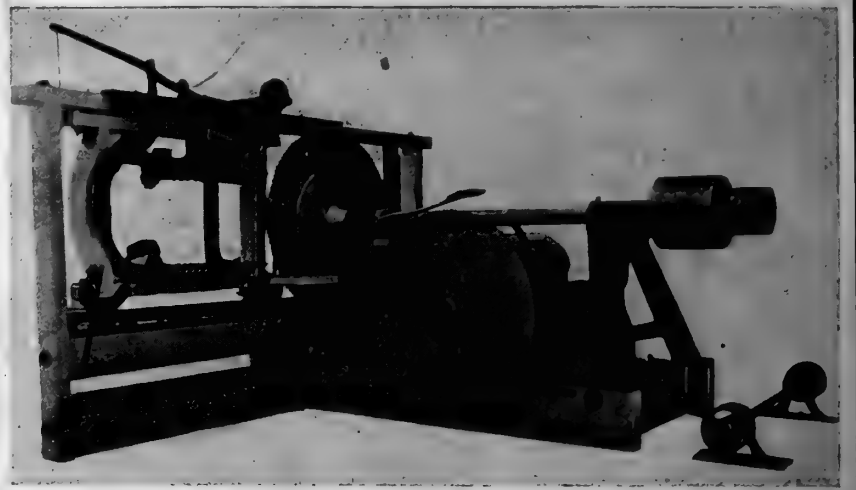
THIS sturdy lath mill has a capacity of 72,000 laths per day. It is well built and moderate in price. The "Superior" machine is guaranteed to run coolly being equipped with our special design ring-oiling-boxes.

Write us for other particulars

The Smith Foundry Co., Ltd.

Engineers, Founders, Machinists, Mill-Outfitters, Etc.
Fredericton, N. B.

Successors to McFarlane, Thompson & Anderson Mfg. Co.



"Dunbar" Shingle Mill

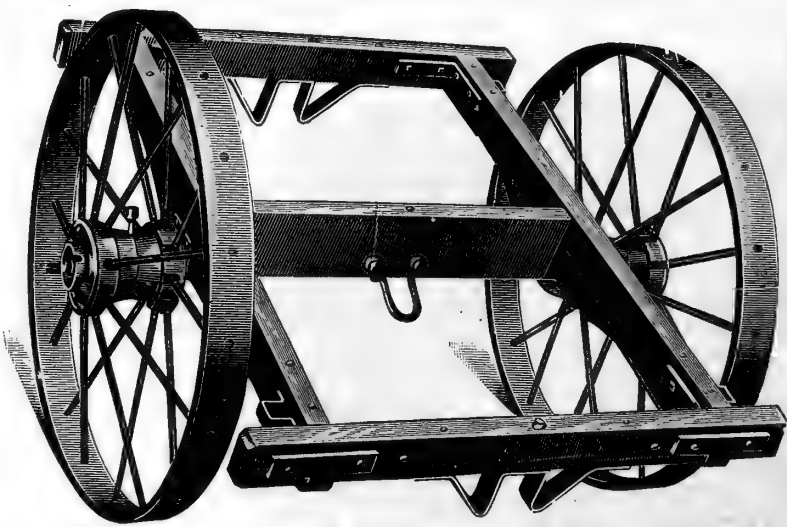
THIS mill is acknowledged the most complete and satisfactory shingle mill on the market. It has a capacity of from 15000 to 45000 per day according to the quality of the lumber.

Our literature contains full particulars.

Maritime Foundry & Machine Wks.
Limited

Chatham,

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The Truck That Saves It's Cost Several Times Over in The Year

This truck is designed for lumber yards and planing mills and will be found invaluable for loading and unloading cars.

The front gearing is detachable and may be used with eight or twelve hind gearings. It is a double-header, nuts on axles being kept tight with Steel Cotter Keys.

Oil cups on the wheels and the fact that there is no resetting of tires saves any amount of trouble.

The old wooden-wheeled truck is a back number in comparison with this. It will pay you to write for our general catalogue which describes these trucks in detail, and pick out the style you want now.

Tudhope - Anderson Co., Limited
ORILLIA, ONT.



Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

Size "S" Single Mill with 16-foot Carriage

Size Husk 3 feet by 6 feet 3 inches
Diameter and Length Mandrel . . . 2 3/16 by 55 inches
Size Drive Pulley 20 by 10 inches
Feed per Revolution of Saw 0 to 3 1/4 inches
Feed Belt 4-inch Gandy
Largest Diameter Saw 56 inches
Length of Carriages 12, 16, 20 or 24 feet

Width of Carriages 33 inches
Trucks 7-inch wheels and 1 1/4-inch axles
Length Track 32, 40, 48 or 56 feet
Style and Opening of Blocks CI-36 inches
Style Mill Dogs Pony Excelsior
Style Set Works No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C. E. Long Mfg. Co., Orillia, Ont.



Fill out this Coupon and mail today. Booklet will be sent free.

— SPARTAN —

The Unconquerable

The Saw Mill—the Planing Mill—in fact every woodworking plant constantly demands a maximum of power.

It is in these plants that the highest degree of power efficiency was not attainable until **Spartan** "The Unconquerable" was introduced.

The modern machines and those **Spartan** equipped guarantee you a plant continually operating at maximum efficiency.

Spartan Belting embodies great pliability, wonderful tensile strength and extraordinary durability.

To this unique combination **Spartan Belting** owes its present universal popularity—a combination which renders **Spartan** especially adapted to the exacting demands of planers, matchers and other woodworking machinery.

Send for further particulars and for Spartan Book

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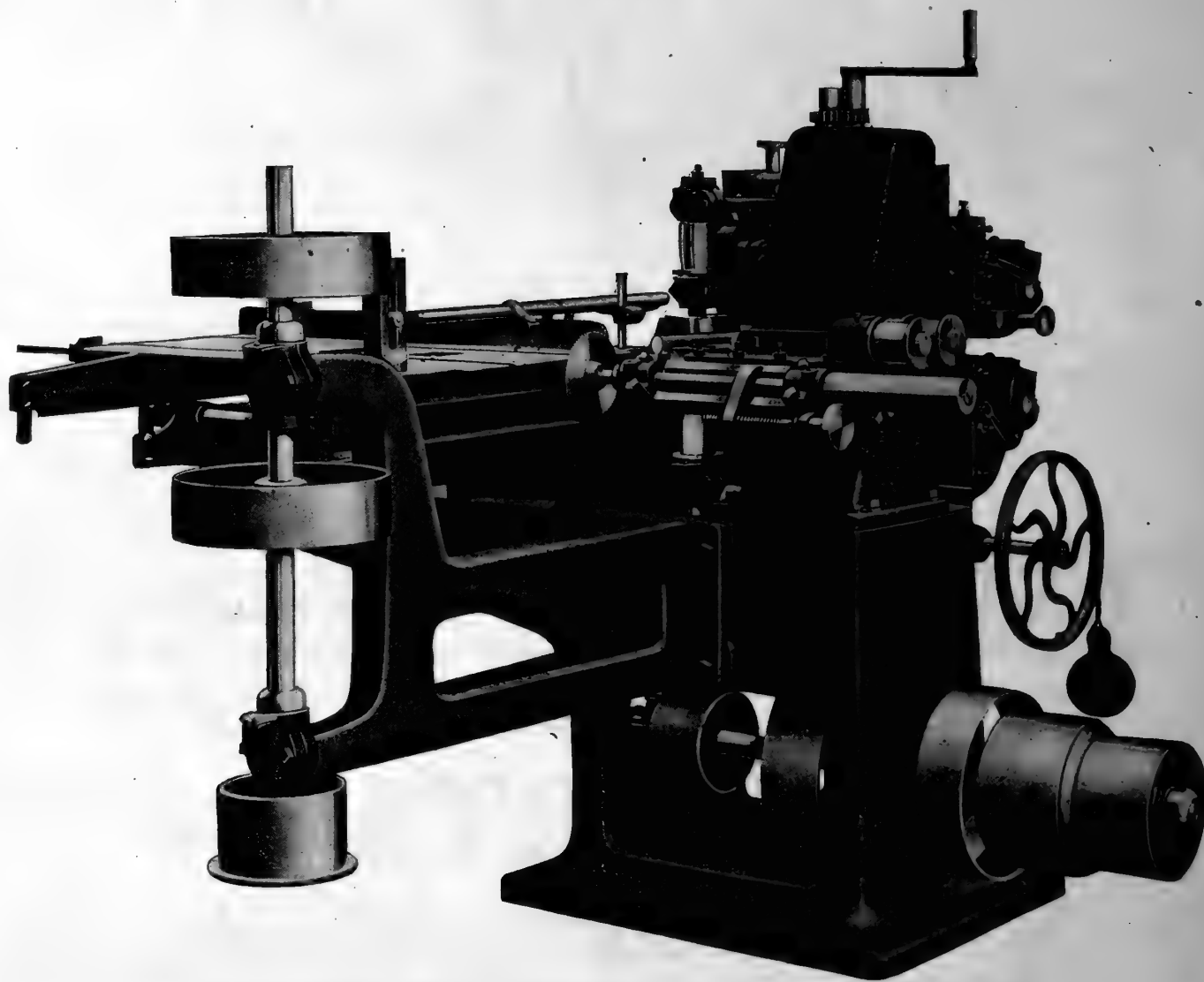
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Please send me prepaid, Booklet "Spartan Belting."

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504 TENONER WITH DOUBLE COPES AND CUT-OFF SAW

Your attention is directed to our new No. 504 TENONER. This machine has been on the market for a short time, in which OVER TWENTY have been sold and are giving universal satisfaction. In announcing this machine we offer a Tenoner in which every modern idea has been embodied. Our long experience with woodworking machinery has enabled us to build a Tenoner which will produce perfect work with great speed and ease of operation.

Machine can be supplied with single or double copes, or cut off saw, as desired.

Bulletin No. 504 detailing all the improvements which invite your investigation sent on request.

Canada Machinery Corporation, Limited
Galt, Ontario

Largest Builders of High Class Wood-Working Machinery in Canada

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
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Cedar Siding
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Shiplap
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from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbing (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot Overslab."

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410 White Building — — SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.



Not a Cent for Repairs

NEW Standard 54-inch Band Resaw

A Specialty Not a Side Line
BAND RESAWS

Pittsburgh, Pa., Nov. 5th, 1913.

Gentlemen :-

We are using your resawing machines in both our Pittsburgh factory and our Kress, Virginia, Shook Mill, and every one of them is giving the best of satisfaction.

We are running these machines day-in and day-out without any loss of time or material and none of the machines have cost us a cent for repairs in eight years.

Truly yours,

F. J. KRESS BOX COMPANY.

Wm. B. Mershon & Company
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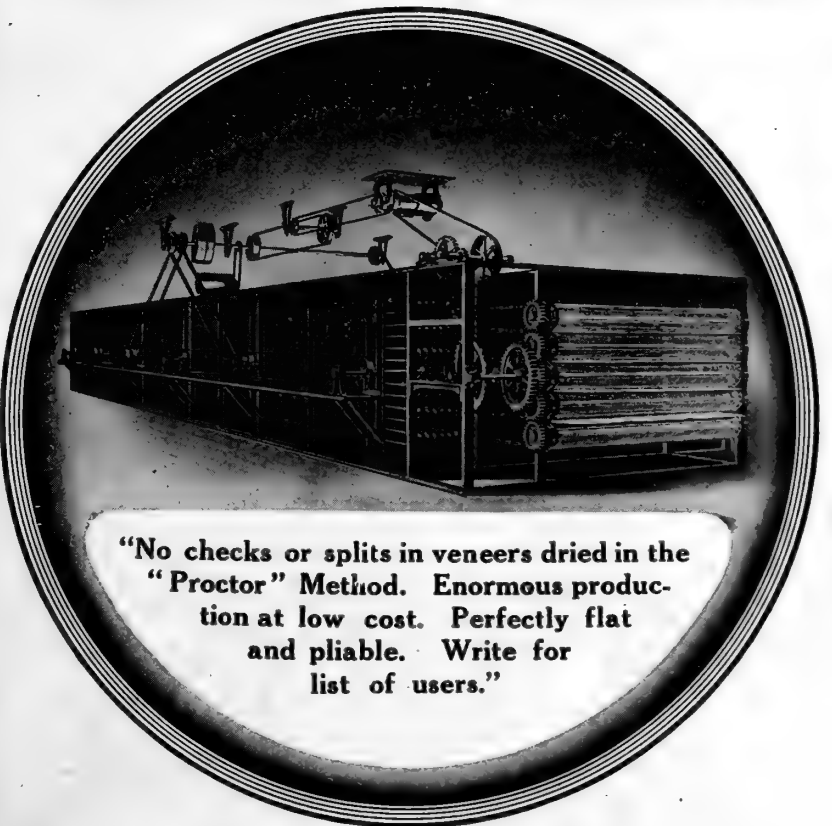
BARRELS, KEGS, STAVES AND HEADING

OUR SPECIALTY.

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"No checks or splits in veneers dried in the 'Proctor' Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

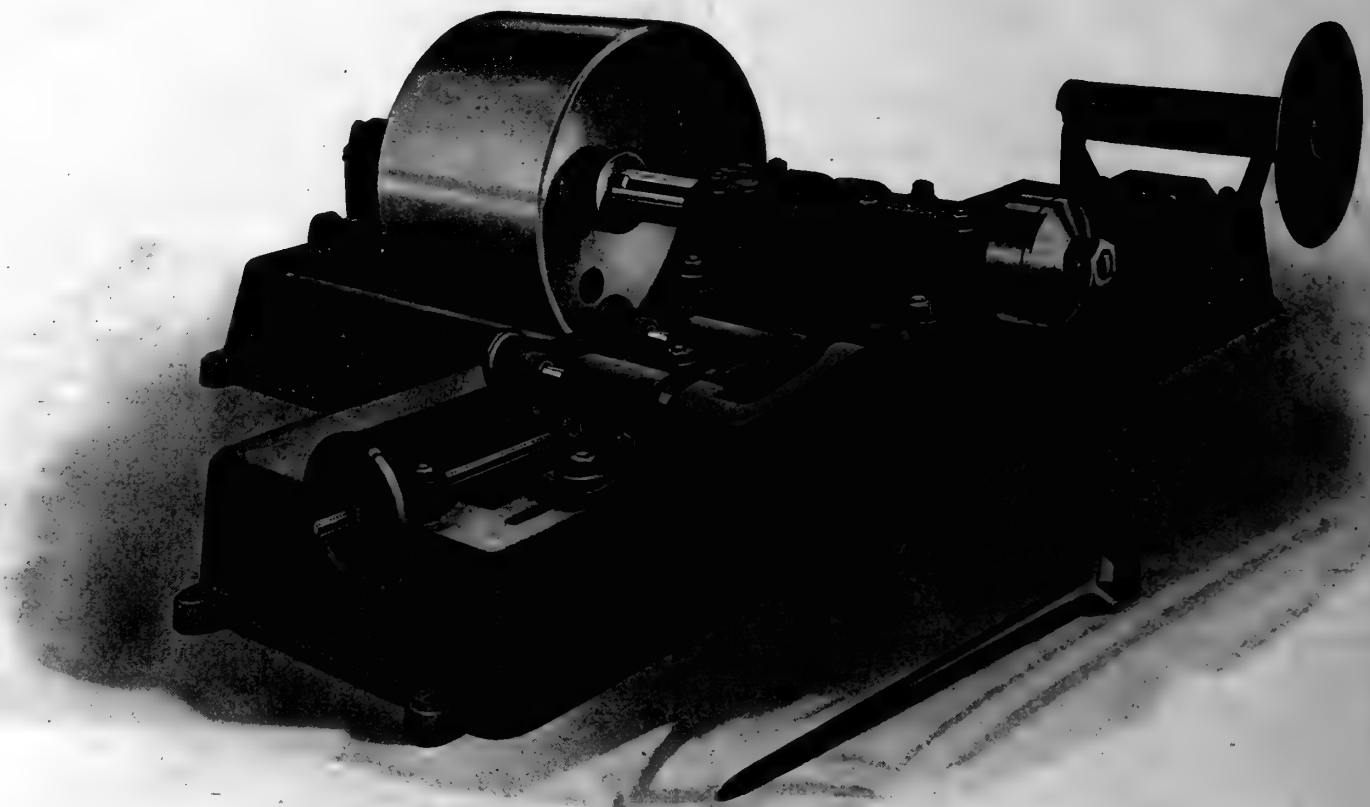
THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.

The Mark



of Quality

A New Exponent of Long's Quality Line



No. 2 Iron Saw Frame, for Saws from 46" to 66" in diameter.

OF few parts; mounted on a *unit* base—one solid casting—with bearings fully water cooled; with every part adjustable and every part *accessible*; this machine is built for heavy production and long service.

Note especially the improved saw guide, the connected bearings and the freedom of interference with the driving belt, no matter from what position the machine is driven.

Send a post card for our Bulletin
on this machine, it's worth while.

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Our 70th Birthday Wish



A Successful and Prosperous New Year

THIS year we celebrate our 70th anniversary. It is now more than half a century since we commenced building machinery for the lumbermen of Canada, and in looking back over the long years we have spent together we are glad to remember the vicissitudes and the successes we have shared in common. The ups and downs—they are what have drawn us together—and we feel that it is to real friends we speak in extending the Season's Greetings to the Sawmill Men of Canada

The Waterous Engine Works Co., Ltd.

BRANTFORD, CANADA

Agency—H. B. Gilmour, Vancouver, B. C.

Branch—Winnipeg, Man.



\$5,000,000.00

worth of mixed metals is what we market every year



PEERLESS metal is compounded specially for sawmills and is the best on the market for that purpose.

FAULTLESS metal is a high grade copper hardened alloy made for heavy duty work, sawmills and engines. Our policy is large tonnage, perfect alloys, and absolutely fair and honest treatment of the trade.

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MANUFACTURERS OF

Staved Columns
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MANUFACTURERS
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THE
LEATHER
BELT
THAT'S
KNOWN
OUR
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MONTREAL
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The J. C. McLaren Belting Co.
Limited

General Mill Supplies

MONTREAL



BOILERS

"INGLIS" boilers are the product of over 50 years' experience and study combined with the most modern equipment for boiler making.

"INGLIS" boilers are made in every type and all sizes.

Let us quote on your requirements.

The John Inglis Co., Ltd.
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Canada Lumberman

Time is Money

The rapid cutting File is the economical File

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American - Arcade - Eagle - Great Western
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are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.

Dread-
nought
Brand



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nought
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Electric Welded Steel Loading Chain

SIZE	LKS. FT.	PROOF TEST	BREAKING TEST	WT. 100 FT
7/32	16	2200 lb.	4500 lb.	60 lb.
1/4	14	2500 lb.	5000 lb.	80 lb.
9/32	13	3500 lb.	7000 lb.	90 lb.
5/16	12	4500 lb.	9000 lb.	110 lb.

Guaranteed to pull stiff before breaking

McKINNON CHAIN CO., ST. CATHARINES, ONT.



NO FRAYING AT THE EDGES

Dick's Balata Belting possesses perfect uniformity throughout, whereby true and steady running is ensured, fraying at the edges rendered impossible, and perfect success in fork driving guaranteed. The combination of strength and uniformity in Dick's Belts is due to the process of solutionizing to which the textile portion of the Belting is subjected, and which thoroughly solidifies and unites the whole material.

You can get all the facts in our Catatog No. 17.

DICK'S

Balata Belting Leather Belting Wood Split Pulleys Shafting Hangers Iron Pulleys
Steel Pulleys Saw Mill Supplies Clutches Babbitt Wood-Working Machinery Steam Goods

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Fairbanks Scales Fairbanks-Morse Gas Engines Safes and Vaults
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SOLE MAKERS MONTREAL

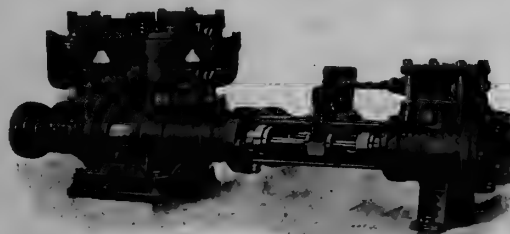
Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER



The Belt that will last longer, stretch less,
and transmit more power than any other belt.

**First: BETTER PUMPS
Second: BETTER SERVICE**

You pay us for the **FIRST** and you consequently get
the **SECOND**



The
**Smart Turner
Machine Co.**
Limited

Hamilton - Canada

THE STRONGEST CHAIN IN THE WORLD

**"Weldless
Steel Chain"**



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwt. (20,486 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

MONTREAL

Midland Planing Mill Products

THE LEADING STOCK LINES IN ONTARIO

WE find that we can cut the labor cost of Sash in two, when we have the right kind of orders.

It is the single one of a size that costs a lot to make, and it isn't fair to the man who orders in quantity of each size to pay the same price as the man who buys in small lots.

Many Dealers in Builders' Supplies have heretofore refused to stock Sash for this very reason, and also because they did not have a reliable source of supply with good goods, reasonably prompt deliveries, and prices in proportion to the size of the order.

In addition to the regular trade discounts, we allow certain Discounts for Quantity, which are liberal almost beyond belief.

Complete information with prices and discounts will be found in our new Sash Book.

A copy is yours for the asking.

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

Your Orders For Red and White Pine

We are in position to take care of orders for almost anything in Red and White Pine.

In addition to a large assortment of 1, 2, 3 & 4", we have on hand the following dimension timber in Red and White Pine.

6 x 6 — 10/20'	60,000'	8 x 12 — 12/20'	6,000'
6 x 8 — 12/18'	18,000'	10 x 10 — 20/24'	5,000'
6 x 10 — 12/22'	18,000'	10 x 10 — 12/18'	125,000'
6 x 12 — 16 & 18'	22,000'	10 x 12 — 12/18'	35,000'
8 x 8 — 12/24'	30,000'	12 x 12 — 12/24'	70,000'
8 x 10 — 12/18'	65,000'	12 x 12 — & 14 x 14	5,000'

Prompt shipment can be made of any of the above. We also have a dry Kiln and Planing Mill in connection, and are in position to do milling on short notice.

George Gordon & Company

Limited

CACHE BAY - - - - - ONTARIO

Stock List of Unsold Lumber Now Ready

Write for copy

The Colonial Lumber Co., Limited.

Pembroke, Ont.

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THAT'S
I N E

P I N E
THAT'S
I N E

IF YOU APPRECIATE

our care in manufacturing reliable and dependable Pine Lumber — our quick methods of shipping — and our “always right” prices, you'll be glad you sent that order for

WHITE PINE

to us. We can fill any size bill you want.

JOHN LUMSDEN

Manufacturer of Pine Lumber

LUMSDEN'S MILLS, QUE.

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Everything in Timber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

Write, Wire or 'Phone for Prices

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We Are

now operating our mill both
day and night and are able
to supply special bills in

Pine and Hemlock

Hocken Lumber Co.

Limited

Otter Lake Station, Ontario

13 FT. STOCK
GOOD GRADE AND
MANUFACTURE

SPRUCE

1x9, 1¼x9 and 2x9.
SEE STOCK LIST
BELOW

For Quick Shipment from Stock in Yard. Rail or Water Deliveries.

Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Clear & No. 1
1x4	1x9	1½x7	2x4	2x9	3x7	1x4
1x5	1x10	1½x8	2x5	2x10	3x8	1x6
1x6	1½x4	1½x9	2x6	3x4	3x9	1x7
1x7	1½x5	1½x10	2x7	3x5	3x10	1x8
1x8	1½x6	2x8	2x8	3x6	3x11	1x9
					3x12	1x10

DRY SPRUCE, 10 to 13 feet LENGTHS (mostly 13 feet).

We also solicit Special Sawing Bills of 13 foot Spruce for future delivery.

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Manufacturers of High Grade

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Timber for R. R. Construction and
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**Long and Short Leaf
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Daily capacity of each mill

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100,000
40,000
50,000
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Estimate of Hemlock Timber at Coe Hill on C.N.R.

Cut Jan. and Feb. 1913, and in good shipping condition — which we wish to move

17 pcs. 6x6 -12 No. 1 Hemlock	6 pcs. 10x10-16 No. 1 Hemlock
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54 pcs. 10x10-10 No. 1 Hemlock	6 pcs. 12x12-16 No. 1 Hemlock
510 pcs. 10x10-12 No. 1 Hemlock	3000 ft. 4x8-12, 14 and 16 No. 1 Hemlock.
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New Phone Number Main 3658

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Send me Your Orders for

100 M 1 x 4 Mill Run White Pine, Box Out
190 M 1 x 5 " " " " " "
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Pine, Spruce, Hemlock, Basswood, Lath

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THE MCGIBBON LUMBER CO. OF PENETANGUISHENE

Manufacturers of and Dealers in

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HEMLOCK BILLSTUFF a Specialty of which we have the Best Assortment on Georgian Bay.

Don't wait to write. Phone us your requirements.

All stock sized or matched if required.

Our Yards are Unequalled for Drying Lumber

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60,000 feet	2 x 4—6/10
80,000 feet	2 x 4—12
100,000 feet	2 x 4—14
125,000 feet	2 x 4—16

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HAMILTON, ONT.

Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

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Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**

The J. B. Snowball Co.

Limited

Chatham, New Brunswick, Canada

FOR SALE

20	M.	3 x 4 1/2	Spruce	10 ft., and up
50	M.	2 x 5	"	" "
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30	M.	2 1/2 x 7	"	" "
140	M.	3 x 4 and 5	"	" "
300	M.	3 x 6	"	" "

All in good shipping condition.

Now contracting for delivery during the
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Spruce, also 2" Spruce.

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N. B. Cedar Shingles *of all grades*

Special Prices for shipment to
All Ontario Points

Dalhousie Lumber Co., Limited
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The rates are most reasonable, write us.

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13 Foot and 16 Foot

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Saw Mill and Novelty Works. All
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*Send me your requirements, I can furnish
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Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

RAILS For Tramways, Sidings, Etc.
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The Celebrated Diamond Brand

End Matched, Bored,
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Saddle Tank Locomotives
Geared Locomotives
Steel Rails
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All Secondhand

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Lumber

We are in the market for the
output of mills manufacturing

**White and Red Pine
Spruce, Jack Pine**

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also the output of mills manu-
facturing any or all kinds of
Canadian Hardwoods — Write
us at once. Will pay the high-
est cash prices and ship stocks
out promptly. We are buying
now our 1914 stocks. Write
us giving list of lumber you
have or amount you expect to
have this season.

**C. G. Anderson Lumber
Company, Limited**

Manufacturers and Strictly Wholesale
Dealers in Lumber

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THE MEAFORD LUMBER CO.

have the following stocks, namely:
**Maple, Birch, Ash, Basswood
Elm, Spruce, Hemlock and Pine**

We deal in all kinds of Sawn
Lumber.

We will be pleased to answer
all enquiries and to quote close
prices.

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WE Buy, Sell and deal in all kinds
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White Pine, White and Basswood, Ash,
Cedar, Douglas Fir, Beech, Birch, Wal-
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**The Canada Wood
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Manufacturers:

Lumber, Hardwood Flooring,
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Stock, Cheese Box Hoops,
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Write, Telegraph or Telephone
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SPECIALTIES

Sawn Hemlock
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Timber Estimates
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**OATS, HAY,
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**Southern
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of any kind—
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at reasonable
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Competent employees for saw mills and woodworking plants are scarce. The best of them read this paper regularly. To get in touch with good men send a "Want Ad" to the

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Special Hardwood Offer

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Dry and Well Manufactured
Good Grades Prompt Shipments

Order early and avoid delay by Car shortage

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Planing of all kinds done by carload. Rail-
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All classes of building material, lime and
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Write us for particulars
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For Immediate Shipment
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Moulding, Sash and
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SPECIALTY: Dressing of wood
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**Dry Norway
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All Sizes and Grades



Our Double Band Mill, Huttig, Ark.

Why We Can Give "Value Received"

We Own one hundred thousand acres of the best virgin Southern Hardwood timber.

We Operate large band mills at Huttig, Ark., and Deering, Mo.

We Cut Forty Million feet of hardwoods annually and carry 15,000,000 feet in stock.

We Sell only stock cut on our own mills and so can **GUARANTEE** the quality of every shipment.

We Ship high grades that increase the size and percentage of your cuttings, reduce factory costs and shrink the waste pile. Therefore:

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Let us prove this on your next order.

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Matching, Dressing and Re-sawing

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We are Equipped to Dress and Bore
Heavy Georgia Pine Timbers

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Manufacturers of
**Lumber and Lath,
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4/4" and 5/4" Spruce

2 x 8 and 2 x 10 Spruce

Dry Factory White Pine—all thicknesses.

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WE BUY FOR CASH

Mill Cuts of
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Dry Stock

1 x 4-5-6, No. 1 Spruce
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1 x 4-5-6 Red Pine Flooring Strips
1" White Pine, Nos. 1 and 2 Culls
Spruce and Hemlock Lath

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Manufacturers of

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Mills at Victoria Harbor, Ont.

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☐ Keep your name before lumber buyers by constant advertising.

☐ Familiarity heeds business.

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and Woodworker**
Toronto, Ontario

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The Elgie & Jarvis Lumber Co., Ltd.
LUMBER MERCHANTS,

18 Toronto Street, TORONTO, ONT.

Telephone Main 5584

Pine, Hemlock and Spruce
(Rough or Machined)

Lath and Crating Material

We offer the following

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2 x 4," 10, 12, 14 and 16' each length piled separately
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2 x 8," 10, 12, 14 and 16' " " " "
2 x 10," 10, 12, 14 and 16' " " " "

Leak & Company, Limited

18 Aberdeen Chambers, TORONTO

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J. Burstall & Company

Timber and Lumber Merchants

**Shippers of All Kinds
of Lumber and Timber**

Head Office, Quebec, Que.

Branch:

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J. Burstall & Company, Ltd.

57 Gracechurch St. E. C., London, England

Winter Sawn, Ready to Ship

400,000 ft. 1 x 4/up—6/16 No. 2 Com. and Better Maple

150,000 ft. 2 x 6/up—6/16 No. 1 “ “ “

100,000 ft. 1 in. Mill Cull Ash

This stock is winter sawn and in good shipping condition.

We would be pleased to receive your enquiries

Our new mill will be in operation by the first of the year when we will be pleased to take care of your winter's sawing. We will be glad to hear from you now regarding winter sawing.

Fassett Lumber Company, Limited

Fassett, Que.

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

CORRESPONDENCE

SOLICITED

Mills at:

St. Pacome, Que., Canada

**On I. C. Ry. 75 Miles East of
Quebec City**



MONTREAL - Canada

Large stock of 1" 1¼", 1½" and 2" WHITE PINE, Bone dry.

SPECIAL LOW PRICES

on 1¼", 1½", and 2" Shipping cull sidings and cut ups.

Offices at
97 St. James St., Montreal

Mills at
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Mack Axes

The World's Best

HERE are six styles of axes that are made from special crucible steel bit and capable of retaining an edge longer than any other axes made.

**FELLER, MAXAX
CHIPPER
BEAVER**

" 66 "

OTTOWA CHIEF

Our motto of "Quality and Workmanship" is the foundation of our success and every axe we make can be depended upon to make good our motto.

Get our Prices and Particulars.

The Mack Axe Works
Beaver Falls, Pa., U. S. A.

"CANADIAN MADE"

Fourdrinier Wires and Cylinder Covers

Manufactured in Ottawa by the
Capital Wire Cloth & Mfg. Co.
Dandy Rolls and Cylinder Moulds
Repaired and Recovered

Limited

Machinery and Timber For Sale

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 16-ft. Slash table. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |

FILING ROOM

- 1 Automatic Filing Machine for 12-in. D.C. band saws.
1 Automatic Grinding Machine for 8-in. S.C. band saws.

POWER PLANT

- 1 24 x 36 Slide Valve Engine with 40-in. x 12-ft. extra heavy double arm split fly wheel.
2 Double Duplex, high pressure Water Pumps.
5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
2 125 h.p. Water Wheels.
1 Upright Engine for sawdust conveyor.
1 10 h.p. Engine.
1 Mitts & Merrell Hog.
1 Wood Machine for 22-in. wood.
1 Wood Machine for 16-in. wood.
1 Edger for ripping dry lumber, installed.
1 Edger for ripping dry lumber, not installed.
1 30 h.p. Generator, 250 volt.
1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and rails and turn-tables, particulars of which may be had on application.

Also, contents of machine shop, containing Planer, Drill, Lathe and Machinery, with tools necessary for repair work.

All of the above open for inspection at Parry Sound.

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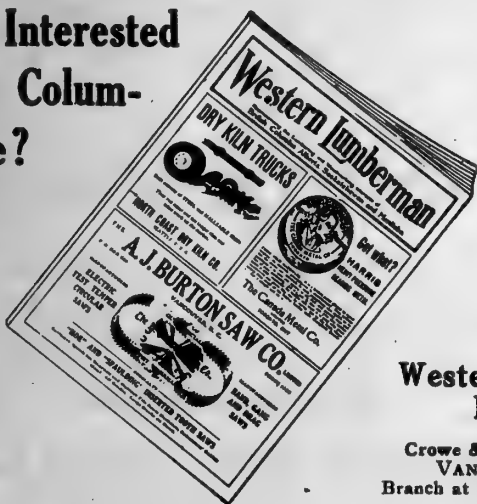
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Figs. 202 and 203 are the leading tools for matching Flooring, Ceiling, etc., for feeds up to 130 lineal feet per minute. They are made with four, six or eight Bits to each Head according to the machine to be used upon, material to be worked, and the rate of feed desired.

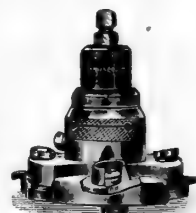


Fig. 202

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The Shimer Cutter Heads for matching Ceiling in double thickness to be re-sawed into two marketable strips, will double the capacity of any matcher or moulder.

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These tools are turned out of Solid Steel Forgings—have the Shimer “make-ready” which saves you all the fitting and trying—keep your work up to the standard.

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1s and 2s, 4/4, 5 cars.
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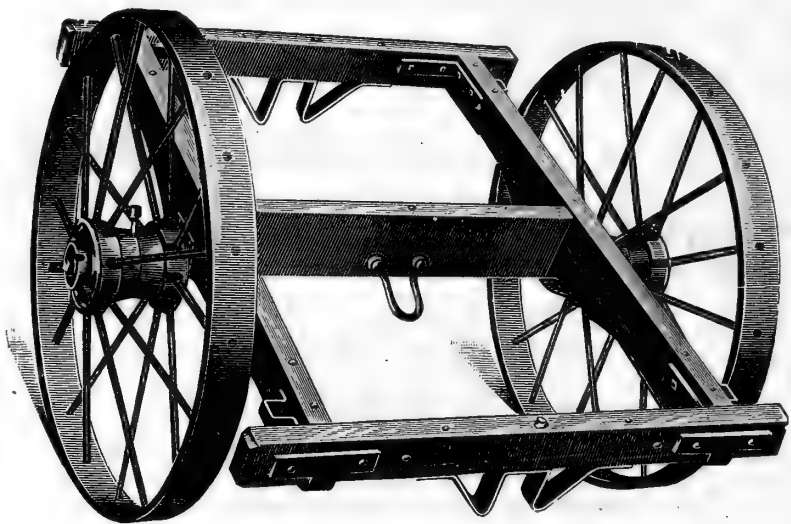
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Canada Lumberman & Woodworker

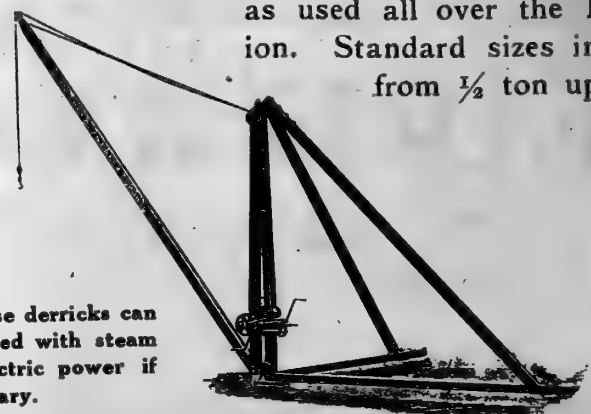
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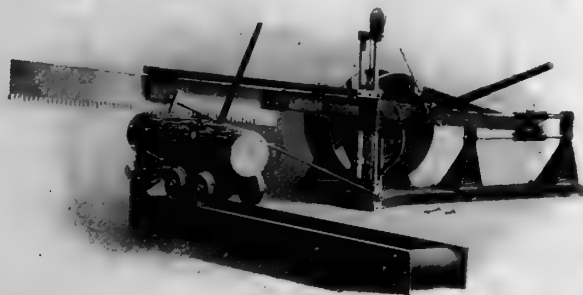


These derricks can be fitted with steam or electric power if necessary.

The "DEFIANCE" NO. 2 IRON FRAME DRAG SAWING MACHINE

A machine worthy of the confidence of every producer of Hubs, Spokes, Handles, Shafts, Poles, Neck-yokes, Single-trees, Rims, Hoops, Staves, Heading and similar products, who purchase their material in the log.

For heavy work this type of machine is the most economical that can be employed. It is a most substantially built machine and will not, therefore, spring or get out of alignment.



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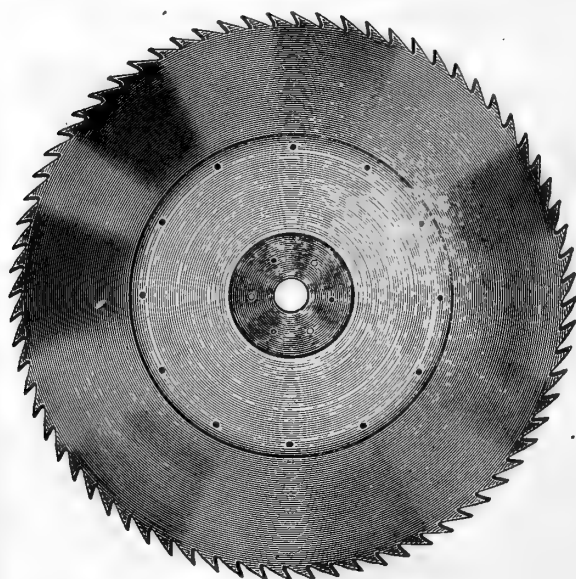
Spruce
Yellow Pine
Oak

(EITHER ROUGH OR DRESSED)

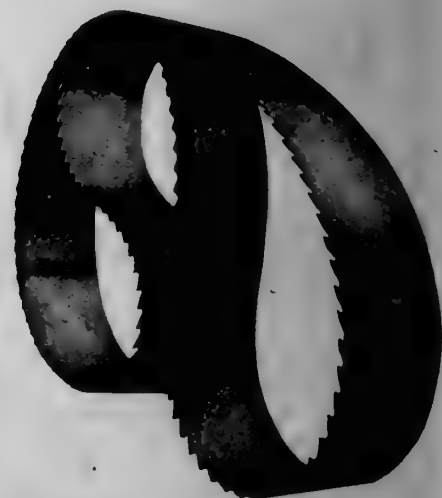
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The
Keen
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Radcliff saws are without a superior. They are made in all types and sizes.

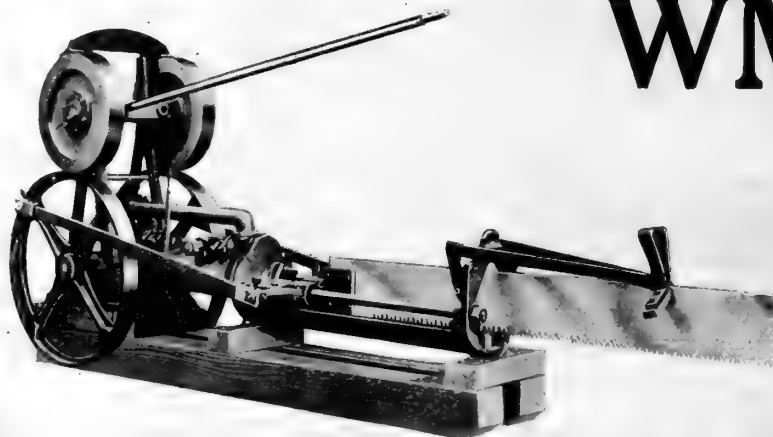
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Keen
And
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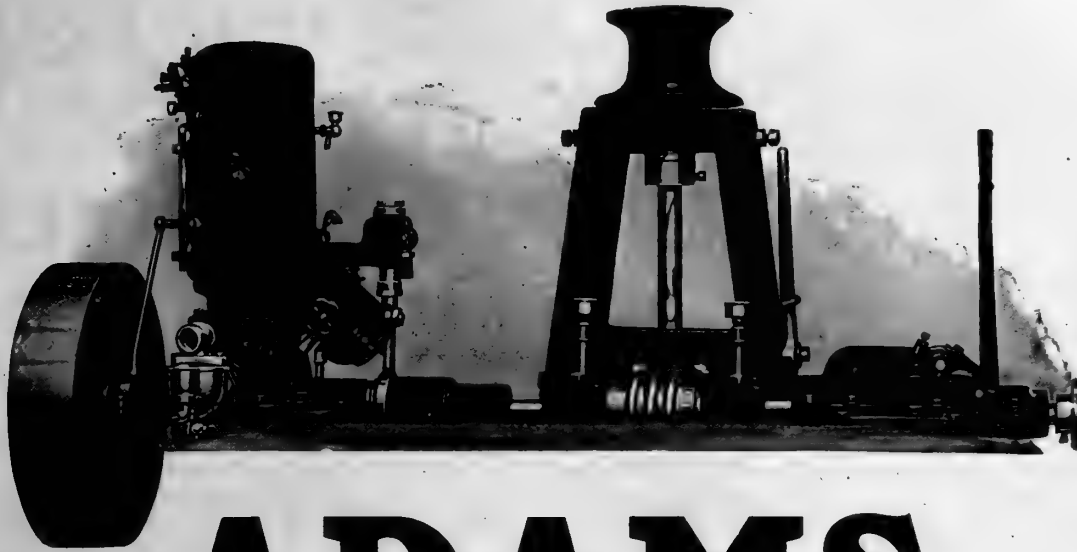


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Don't Buy One of Our Steam Drag Saw Machines unless you want the best. The machine here shown has Positive Stroke; Friction Hoist; forged steel Connecting Rods and cast steel Crosshead. Is made in four sizes—from 26" to 54" stroke.

Write for Drag Saw Catalog fully describing this as well as other types.



ADAMS Towing Machine

The Adams Towing Machine when installed in one of our pointers will do the work of a steam tug.

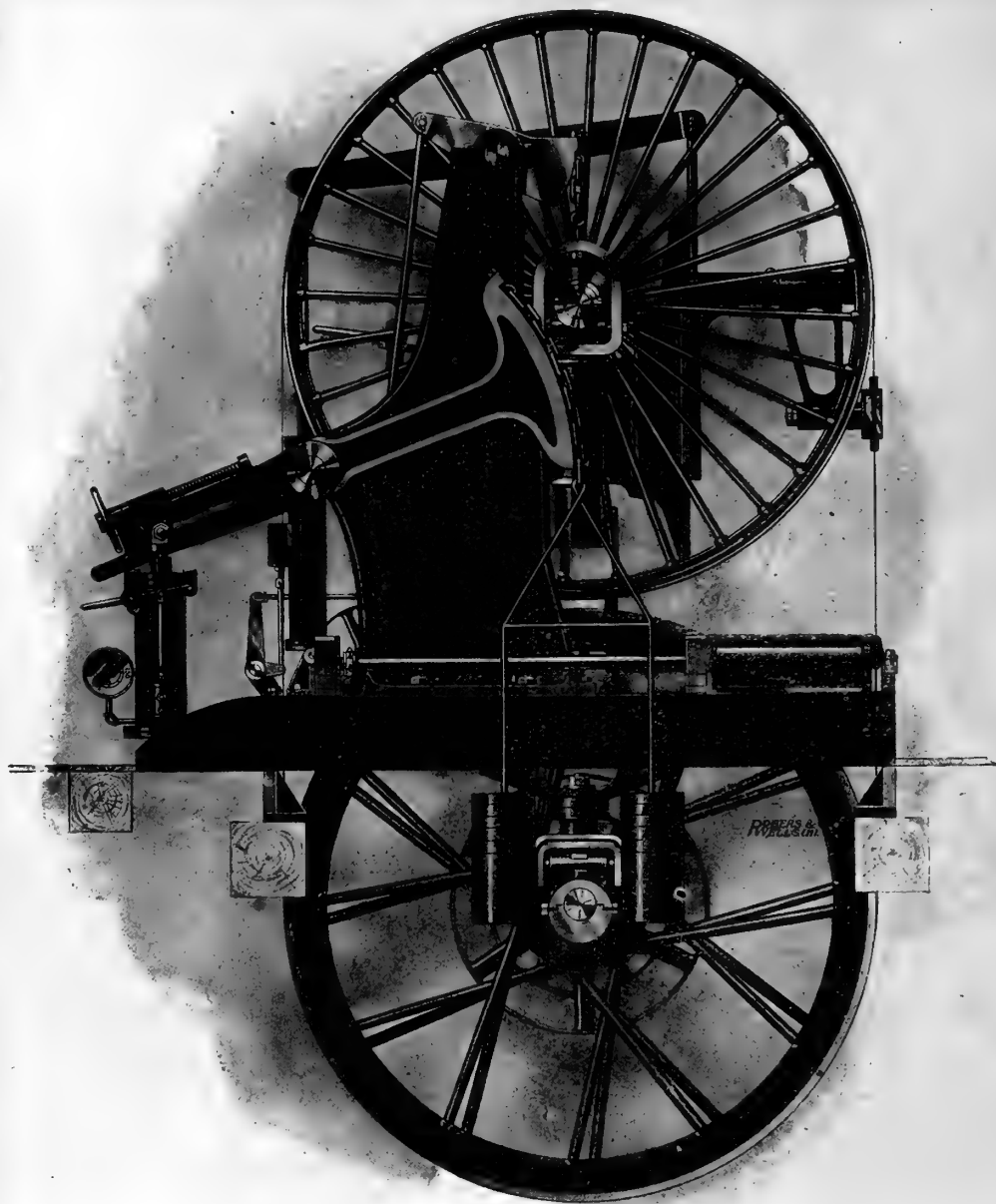
The machine is a strong and reliable heavy duty gasoline engine of 6—8—10—12 or 16 horse-power, as required. It is equipped with a screw-gear winch or capstan 24 inches high from shaft to top of spool, and a reverse gear. The reverse gear is a convenience to disconnect the propeller so that all the power is used on the winch.

The Adams Pointer is planked with cypress with ribs, stems, keel rubbing and clamp streaks of white oak.

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THE top guide on this mill, as well as the upper wheel, is operated by a steam cylinder.

This means that the guide can be moved up or down instantaneously, which in one day's work means quite a saving of time over the ordinary mill. This goes a long way towards paying for the mill by the end of a year.

But this is not all—with this steam operated guide it is just as easy to keep the guide close to the cut as it is to set it for certain size logs and keep it

there. This can be done without loss of time, and so by bringing the guide down close to the cut, vibration of the saw is done away with and the quality of the lumber is improved.

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Crescent grinding and Simonds Steel is a combination that makes the best edge-holding, even tempered, well wearing cross-cut saw that the skill of man has yet been able to produce.

Price is not the factor; it is only results that count in making this the most economical saw on the market.

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 Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, January 15, 1914

No. 2

Freight Rates Readjustment Expected Soon

The recent conclusion of the taking of evidence in connection with an enquiry into western freight rates in Canada, leads to a hope that the Dominion Board of Railway Commissioners will soon announce their decision upon this important matter. It is believed that the judgment of the board will be announced by Chairman H. L. Drayton, K.C., shortly after the opening of Parliament. If this expectation is realized the Dominion Railway Board will have established a new record, having regard to the enormous mass of evidence to be reviewed and digested, the very laborious research involved, and the magnitude and complexity of the issue. It is known that the commission is making every effort to expedite the finding with a view to the early realization of such relief as may result to the western provinces, and with the secondary object of freeing the railway companies from the existing uncertainty, which is admittedly more or less detrimental to their interests. The commission is believed to be conducting its investigation on lines leading to a general readjustment and equalization of rates in western Canada, such readjustment to be, of course, based upon the evidence given at the hearings. This will affect all Canada west of the lakes, but the reductions involved will benefit chiefly the central prairie cities, such as Medicine Hat, Moose Jaw, Regina and Saskatoon, upon which the burden of discriminatory rates has fallen most heavily. Winnipeg and Calgary will also benefit, but to a lesser degree, while Vancouver stands to obtain a good deal.

This readjustment is expected to be the main feature of the coming judgment, but it is said that there may be more. The commission will, it is stated, order specific reductions on one or two of the heavy commodities most largely consumed by the farmers on the prairie and necessarily imported. Coal and lumber are mentioned. In regard to

them a direct reduction is a possibility, and there is also some idea that specific reductions may also be put into effect with respect to grain. These changes are predicted by men who have followed closely the freight rates enquiry since its resumption by Chairman Drayton and the present Railway Commission a little over a year ago, and who are in a position to know what is probably in the mind of the commission. A readjustment such as has been indicated would go far toward satisfying those who brought the question of alleged discriminatory rates before the commission. It would at the same time bear less heavily upon the railways than would a general cut on all commodities. The problem upon which the commission is called upon to pass has been complicated by the entry of two comparatively new transcontinental systems into the western field. The rates of the Canadian Pacific must be considered, together with the rates of the newer and less prosperous transcontinental lines, and the ability of these new lines to do business successfully upon an altered basis of earning from freight carriage in western Canada, has entered into the issue as an important factor.

The expectation of those concerned is that the Railway Commission contemplates such a readjustment as will meet some of the objections raised in the middle western centres from the burden of which they have complained, while at the same time guarding western Canadian communities against any curtailment of present transportation facilities through the inability of the weaker systems to withstand a radical reduction.

Square Dealing Brings Success

"We are not complaining at all, trade is alright for this time of year, so far as we are concerned," remarked a certain Ontario wholesaler recently, in conversation with the Canada Lumberman. "Of course we are not expecting to do a large business at this time of year, but, just the same, we are getting along nicely and we know of some others who are doing just as well." The slack business conditions which have prevailed during the last six months or more have been the subject of discussion in lumber offices almost every time the Canada Lumberman has visited any of them, and of late it has been very noticeable that the former feeling of uncertainty, as to the future, has given way to a fairly general conviction that the tide has changed and that trade conditions will show an improvement from now on. During this period of dull business, however, there have been a few firms which have reported, without exaggeration, that they have done a much better business than others. There must be a good reason for such a difference, and so far as can be judged from appearances and from the general remarks of the trade, the reasons are very definite and easy to find. In the case of the firm referred to above, the explanation is that they have built up a trade in Eastern Canada and in the United States which puts implicit faith in their business methods and which continues to come to them when the trade with other firms is curtailed or cut off entirely. When times are dull, every consumer, who has to reduce the quantity of his purchases, considers whom he shall drop from his list. Those who have given a square deal invariably will remain on the list to the very end. It may be that, during busy times, a square dealing firm sometimes loses business which it might have secured by different tactics, but the quantity of business thus lost is a small matter compared with the assurance of a steady and profitable trade when business with others is dragging.

Retailers' Contest—Who Will Win?

Every retailer who has a good plan or scheme for saving trouble, time, or money in his business, runs a good chance of winning one of the prizes we are offering for the best letter describing it. Read the conditions published on page 42, and let us hear from you. The contest closes on February 1st.

An instance of the way this works out in detail is afforded by the following facts. A certain customer, who had been using mill run birch for the manufacture of furniture, was approached a few years ago by a representative of the firm referred to above and solicited for an order. They had been using the good end in their factory and having a lot of trouble finding uses for the low ends.

"I know you handle a high class of birch," said the buyer, "but you have a reputation for charging high prices and we cannot afford to do business with you." The salesman had expected this reply and told the buyer that he was wasting a lot of money and time buying mill run stocks, etc. To make a long story short, the conversation resulted in a trial order and the next time the salesman called he was told that the stock was the best the firm had ever received and that they had unquestionably saved money and got far better results out of the better grades purchased in this way than they had formerly when they were doing their own buying direct and taking "mill run." Besides, they had no more low end to worry about. They became steady customers from that time on and their business with the firm now mounts into large figures every month, even when times are dull.

The same firm of wholesalers has frequently been able to step in where a large consuming firm has been buying the higher grades, but has not been able to get the inspection desired, without having an inspector of its own at the mill to watch the shipments, a thing which is very difficult and expensive to arrange. The wholesalers in question employ regular inspectors who are on the scene all the year round, wherever their shipments are being made. In this way they have built up a reputation by making sure that the grading is always what it is represented to be. Customers of a wholesale firm of this class will sometimes be tempted to do their own buying. They are frequently solicited to purchase direct, and they often do so on their own initiative. On the other hand, it quite frequently happens that such a consumer has so much faith in the methods of the wholesaler

that he prefers to continue doing business through him rather than make what appears to be a direct saving by going to the manufacturer himself. On both sides of the question there is much to be said, but the argument in favor of the reputable wholesaler is strong and is upheld by the willingness of many consumers to depend upon him for their supplies. Many cases may be cited where the buyer of a large consuming firm, dealing with the wholesalers already referred to above, has refused to deal direct, when finding that the stocks in question are handled by this wholesale firm. They find that, even at a higher price, they can save money by purchasing through wholesalers of this class, on account of the excellent inspection secured.

This instance, and many others, prove the value of the conscientious wholesaler to the trade. He is a man who relieves both ends—manufacturing and consuming—of the uncertainties of the selling and buying business. He becomes, not an unprofitable middleman, but a valuable protecting force, a man who assures the consumer that he will get the best stock available and the manufacturer that he will find steady customers. During time of anxious business, it is a refreshing experience to visit a wholesaler of this class and hear his pleasant discussion of trade conditions when some others are talking of nothing but depression. Just after the new year, when trade was naturally quiet, the Canada Lumberman called upon one of them and before he had been able to ask how business was going along, was greeted with the cheery remark, "well things are looking pretty fair for the first of the year, here is an order sent in by Bill (one of the travellers) for a little over a quarter of a million feet. Our sales for the first three days of the year were something over ten thousand dollars. Not bad eh?" No indeed, not bad, and the natural reflection is that there is a lot of good steady business to be had by those who go after it in the right way, even when others are complaining of dullness. One is reminded pleasantly of the "Brothers Cherryble," in whom Dickens has immortalized just the same type of business man.

Canadian and Siberian Pine

Attention has been called in these columns several times of late to the timber known as Siberian yellow pine, which comes from far eastern Siberia and which is quietly making its way in the markets of Great Britain. Canadians will be unwilling to admit that the equal of Canadian white pine can be found anywhere else in the world. The fact remains, however, that the high cost of Canadian white pine has led to minute search being made in many parts of the world for a substitute, and now, after years of search, a timber bearing all the earmarks of Canadian white pine is coming from Siberia and being accepted in Great Britain by many large consumers, who formerly would not touch anything but Canadian white pine, even though there was a great difference in price in favor of the substitutes. All former substitutes for Canadian white pine have been an inferior class of timber, of a quite different variety. Siberian pine, however, appears to have a splendid chance of becoming recognized as identical with the Canadian timber and therefore likely to be a most important competitor.

Under these conditions it is interesting to compare some of the circumstances attaching to the marketing of the two timbers in Great Britain. Canadian pine today, has an immense freight advantage over the rates of transportation for Siberian pine. The present average freight per standard of Canadian pine to Liverpool is about £2 2s 6d, as against £7 10s per standard for Siberian pine from Vladivostok. History is apparently repeating itself, and we see Siberian pine handicapped by a freight difference, at present, of about £5 7s 6d per standard. In spite of higher ocean freight rates, Canadian pine was able to come to the front, in face of the established position of Baltic woods. It remains to be seen whether the present movement of Siberian pine to Great Britain will survive the handicap of heavy freight rates which it has to carry and a well versed member of the Liverpool timber trade, writing on this subject in a recent issue of a timber journal remarks that it is in no wise a case of Siberian versus Canadian pine; it is rather that the former, on account

of its intrinsic merits now being widely recognized, is forcing itself into "a place in the sun." Many pine users have been found willing to give a trial to the new wood from Siberia, but only on condition that the price should be substantially lower than Canadian pine. The price of the latter has risen considerably of recent years, so much so that other substitutes—with not nearly such fine characteristics as the Siberian pine—have been used in lieu of the Canadian timber.

The distance from Vladivostok to Liverpool is about 12,000 miles—or half-way round the world—and the voyage lasts about 60 to 70 days. The freight on a fairly large steamer cargo is about £14,000, and the pine is not easily shipped save in cargo lots, so that the bringing of this new wood to this country is no small enterprise. On the other hand, the Canadian pine can be brought over in about 14 days, and in parcel lots. Besides this advantage, the Canadians thoroughly know the requirements of the British market and are careful to supply it only with what can be satisfactorily sold and used. The lengths of Quebec pine lumber run from 10 ft. to 16 ft. and rarely exceed 16 ft., whereas Siberian pine lumber is manufactured as long as 23 ft., and generally averages 18 ft. to 19 ft. long. Here in length the Siberian product holds an advantage over its Canadian sister, which advantage several large pine buyers have not been slow to realize. The latitudes of the Siberian and Canadian pine-growing districts are practically the same, though Vladivostok, the shipping port for most of the Siberian yellow pine, has a latitude of 43 deg. 7 ft. N., as compared with the latitude of Montreal, viz., 45 deg. 32 ft. N., and of Ottawa, 45 deg. 25 ft.

Canadian pine of course will continue to be used too, says the writer referred to above, and there is no reason why these timbers should not go hand in hand among the pine-using community, instead of the product of one country being spoken of as an opponent of the other. Each species has similar characteristics, and consumers welcome additional supplies, whether they be from Canadian or Siberian

sources. What a wood consumer will ask is, whether, after all, the Siberian variety is essentially the equivalent in its intrinsic characteristics, appearance, and usefulness to the Canadian pine, and that this is so many people who have tried the wood are convinced. The improvement in the manufacture and grading of each succeeding cargo of Siberian pine lumber has caused an increased demand on the part of large buyers, who previously only used Canadian pine, and effectively demonstrates that Siberian pine is now being successfully used. Probably the majority of the leading machine makers in England are now also using the Siberian pine, where formerly they were sticklers for Quebec pine, and Quebec pine only.

The above facts, which review the situation as it appears today, are of great importance to the Canadian pine export trade. They indicate the arrival of an entirely new factor in the trade of Great Britain. They also go a long way to prove that the demand for Canadian pine is so certain in Great Britain that even a costly journey half way round the world will not prevent the consumer from buying a timber which is apparently its equal. The course of a few years will show the truth or failure of this claim, but nothing can injure permanently the market for Canadian white pine in Great Britain—short of the discovery of much greater sources of supply than even those of Siberia.

Side Lines and Success in Retailing

A breezy and cheerful letter upon the retail lumber business and one or two of its important questions appears elsewhere in this issue, written by one of our subscribers, whose remarks have the double merit of being both brief and to the point. The writer, Mr. D. M. Heise of Stouffville, Ont., is one of those retailers whom the wholesaler or the manufacturer is always glad to call upon whether he gets business from him or not. He takes a rosy view of the trade situation and manages to secure a fair amount of business all the year around, whether others are doing so or not. Most of the time he is doing a large business and making a good profit. One needs only to read his letter to find some of the reasons for this enviable state of affairs. In the first place there is no doubt whatever about the class of business Mr. Heise is conducting. It is a retail lumber business, with several side lines which become necessary to a retail lumberman if he wishes to make the most of his opportunities. Lumber, lath, and shingles (wood) head the list of articles dealt in, as mentioned on Mr. Heise's letter paper. Then come steel shingles, asphalt roofing, lime, brick, plasterer's hair, hard wall plaster, verandah columns, drain tiles, etc. This is a natural assortment of side lines for a retail lumberman to handle and it is just such an assortment as has brought success to many a retailer. Mr. Heise's explanation of his reason for handling these side lines cover the whole business of side lines in a few brief sentences.

The retail lumberman who finds possible customers coming into his store and going out without buying, will naturally consider whether he should not stock the articles in request. If they happen to be articles which compete with lumber, lath or shingles, or which assist in selling them, the retail lumber dealer must stock them in order to protect himself. There is nothing else to it. Unless he does so, he will lose a certain amount of trade which would naturally seek

him under other conditions. Unless the retail lumberman makes side lines of such articles he will some day find a more wide awake merchant making a side line of lumber and getting away with a large share of his business. The question is not one of whether a retail lumberman should assist in selling articles which compete with wood, but whether he should keep custom in his own yard or store, when, by a reasonable amount of extension into side lines, he can do so conveniently.

Mr. Heise makes it very clear on his letter head that his principal articles are lumber, lath and wooden shingles. The other articles follow in the list and they all appeal to the man who is an extensive buyer of lumber and impress him with the fact that he can buy a wide assortment of the articles he needs at the one store or yard. Mr. Heise makes a remark which should appeal to other retailers as one which shows his good business sense. Talking of galvanized shingles he says:—"We do not claim that they are better than the wood, we must sell what the customers want, but at their own risk." This is the right way to look at the matter and if every other retailer of lumber, who handles side lines, would look at it in the same way, matters would be greatly simplified. Handling side lines can be made a profitable line of business for the retail lumberman in a great many cases, if it is conducted along such lines as these and there is no reason why, whenever the circumstances warrant, side lines should not to be handled. Perhaps the optimistic outlook upon trade conditions which characterizes Mr. Heise's letter may be partly explained by his methods. "We are thankful to say that our fall trade has been fine" he says, "The last season's trade in this district was the best around here for years. We have no spurts and stops in our trade. It is steady and solid." This is a fine story to be able to tell when others have been discussing the tight money and the financial depression.

Editorial Short Lengths for Busy Readers

The Dominion Labor Gazette for the month of December contains a table showing relative prices of various commodities, compared, by an index number, with the prices which prevailed during the decade from 1890 to 1899, the average price during this period being placed at 100. During November, 1913, the index number for lumber was 113.6. During October, 1913, the same price prevailed. During November, 1912, the index number was 109.8. These figures cover the average prices of fourteen different classes of lumber at various important Canadian markets.

From reports secured from correspondents of the Labor Gazette in various parts of Canada the following summary of trade conditions in connection with lumber during November, 1913, is compiled: The lumber trade was reported very quiet as compared with last year on account of the financial stringency and curtailment of building. Later, however, some improvement was reported. In Western Canada, especially Alberta, farmers were buying lumber as soon as the fall work was over. Mild weather in the East also permitted a continuation of building. A large business was predicted for next year if the financial situation improved. At Montreal better freight accommodation in freights to Great Britain was reported and shipments were being rushed before the close of navigation. Spruce deals were lower in New

Brunswick as stocks in Great Britain were heavy and there was no buying. The removal of the United States tariff was reported to have increased shipments only slightly as yet, but lumbermen expected a larger trade later. It was stated that there was no large supply of cheap lumber in Canada available for export. It was also reported that the demand for export might raise the prices of mill culls and medium grades. British Columbia shingles showed a tendency to advance 50 as the result of the opening of the American market. Pine strips and shorts declined \$2.00, but shipping culls and mill run were reported \$1.00 upward, while mill run spruce, hemlock and tamarac have been advancing.

Lumber manufacturers of Oregon and Washington have voiced vigorous protest against the announced intention of the Union Pacific Railway to construct all of its box cars of steel henceforth. At a meeting of the West Coast Lumber Manufacturers' Association a resolution was adopted and sent by telegraph to President Mohler, of the Union Pacific, urging the railroad to reconsider its action and thereby aid the railroad itself which draws a heavy traffic from the lumber industry of that section.

Hemlock Stocks About Half Normal

Manufacturers Report Conditions That Will Bring Good Prices if Trade Picks Up—Logging Conditions Unsatisfactory

A meeting of hemlock manufacturers of Ontario was held at the Queens Hotel, Toronto, on January 8th. Although the attendance was small, the meeting was one of the most interesting the hemlock men have ever held. Mr. W. W. Carter, of the Fesserton Timber Company, Toronto, occupied the chair and in opening the meeting said that at the present time all trade was quiet and the lumber business was no exception. Everybody seemed to be buying only what was actually required. The money stringency was having its effect on all lines of business. So far as hemlock was concerned he did not think that there was any large quantity of stocks on hand. There was probably not more than half as much stock on hand as there was a year ago. At present, prices were well maintained. His company had been getting \$20 per thousand on an eight cent freight rate. Hemlock had been meeting with severe competition on account of the heavy importation of yellow pine which was being sold very cheaply in Canadian markets. Most of this yellow pine was short leaf and about 90 per cent. of it, he believed, in fact nearly all of it, was blue moulded, and a great many of the large operators in the city would not use it at all because they claimed that its life in a building, once the blue mould appeared, would not be more than five or seven years. He thought that the competition of yellow pine would right itself in time, especially when the money stringency was over. Michigan hemlock was coming into Canada at low prices and getting into the markets as far east as London and Toronto. The money stringency was blamed for this situation also and he did not think that it would last very long. As to the quality of the Michigan hemlock, its grading was not the same as the grading of Ontario hemlock. The Michigan "merchantable" grade was, in fact, similar to the "merchantable" grade in eastern Canada.

Present indications in the woods were that the output this winter would not be large. A very low price was being offered for bark at present. At the best, he thought, the output would only be as large as it was last winter. If the present weather conditions continued they would probably only have about half as much as they had last winter. Mr. Carter discussed the relative values of yellow pine and Canadian hemlock, remarking that one very important feature must be borne in mind, namely, that the immediate cost of the yellow pine to the consumer was considerable. He had to put up money for a long freight haul, probably \$150 on a car. The small amount of the purchase price, representing the actual lumber itself, on which he got 2 per cent. off for cash at the due date of the bill, compared very unfavorably with the amount upon which he secured his discount if he bought Canadian hemlock. Moreover, when they purchased American lumber they were sending money out of the country and helping to make the money stringency in Canada. The thickness of the yellow pine and the Michigan hemlock should also be kept in mind. Practically all of the American hemlock and yellow pine 2 in. plank was only 1¾ in. thick, whereas the Canadian hemlock was 2 in. In buying Canadian stocks therefore, the consumer obtained a greater quantity of lumber for his money, and correspondingly greater value.

Mr. Carter also drew attention to the importance of maintaining the grading standard in connection with Canadian hemlock. They had established an excellent grading system which had helped their trade considerably and ought to be maintained rigidly.

Mr. Chas. McGibbon, Penetanguishene, Ont., stated that the hemlock situation in his opinion had improved of late. A short time ago it had looked as if United States hemlock and yellow pine were going to depress prices in Ontario. Taking into consideration the cost of production to-day there was not very much profit in the business and if prices tumbled there would be nothing. He believed that users of wood in Ontario had not been educated sufficiently to the advantages of Canadian products. He commended a pamphlet issued by the Northern Hemlock and Hardwood Manufacturers' Association, Wausau, Wis., which calls attention to the durability and adaptability of hemlock. He suggested that a pamphlet upon similar lines should be prepared and published by the Ontario Hemlock manufacturers and that copies should be sent out to architects, contractors, retail lumbermen, etc. He dwelt also upon the relative values of yellow pine and hemlock, claiming that the blue rot, to which yellow pine was subject, made it vastly inferior to hemlock and declaring that the users of wood in Canada should be awakened to this situation.

Mr. McGibbon believed that prices at present were at about their proper level. Operations in the woods would be as expensive this year as they had ever been before and he believed that prices must be maintained, if they were to secure any profit at all.

Several other members who were present took part in the discussion, their views being along very similar lines to those of Mr. Carter and Mr. McGibbon. It was decided to follow Mr. McGibbon's suggestion and arrange for the publication of a pamphlet promoting the use of hemlock.

Lumbermen Included in Honor List

Ottawa, Jan. 6, (Special to the Canada Lumberman). — Among the six Canadians who were included in the New Year's honor list it is interesting to note that four of them are either lumbermen or connected with the lumber industry. The four are: Henry Kelly Egan, of Ottawa, now Sir H. K. Egan; Mr. Aubrey White, Deputy Minister of Lands, Forests and Mines for Ontario, honored with C.M.G.; Sir Francis Langelier, Lieutenant - Governor of Quebec, who is given a K.C.M.G., and Hon. Lieut.-Col. Sir Douglas Cameron, Lieutenant-Governor of Manitoba, who is also honored with a K.C.M.G.

Sir Henry K. Egan is one of the best known lumbermen in Ottawa. He is managing-director of the Hawkesbury Lumber Company and also a director of the Bank of Ottawa, the British Canadian Bank Note Company, and the Ottawa and Montreal Power Transmission Company. He was born in Aylmer, Que., January 15, 1848, so that he will be 65 years old on the 15th of this month. He is connected with several prominent charitable institutions in Ottawa. Several times he has refused nomination for a seat in the House of Commons.



Sir Henry K. Egan, Ottawa

National Wholesalers to Meet at Buffalo

The next annual convention of the National Wholesale Lumber Dealers' Association will be held at Buffalo on Wednesday and Thursday, March 4th and 5th. The details of the convention are being arranged by Mr. E. F. Perry, secretary. The holding of the convention at Buffalo will be a matter of interest to Canadian members who now number some thirty or more. The hosts of the occasion will be the Buffalo Lumber Exchange, the officers of which are A. W. Kreinheder, president; John McLeod, vice-president; and John S. Tyler, secretary. The holding of the convention at Buffalo makes it of interest to recall the position which that city occupies in the lumber world of the United States. Receipts of lumber at Buffalo during 1912 totalled no less than 128,674,000 feet. Shingle receipts amounted to 614,295,000 pieces. Buffalo's main claim to importance from the lumberman's point of view, in addition to its extensive markets, is the fact that the port of Buffalo includes the entrance to the Erie Canal, which has recently been widened and deepened to admit boats with a maximum capacity of two thousand tons. This canal carries traffic through to New York City and provides, in conjunction with the Great Lakes, exceptionally favorable facilities for the carrying of lumber to the markets of the great eastern States. The cost of widening and deepening this canal has been approximately \$150,000,000. It is expected that the opening will be celebrated in 1915.

Reduces Rates on Import Pulp Wood

Ottawa, January 8th: Commissioner McLean, of the Dominion Board of Railway Commissioners, has issued a judgment dealing with the complaint of the Howell Company of Toronto in regard to the increase of railway rates on import pulp wood to various points on the C. P. R., C. N. R. and Grand Trunk, and the effect of the judgment is to reduce the rate per hundred pounds on shipments from Montreal to Windsor Mills from nine to eight cents, the same rate as applies to Shawinigan Falls. Commissioner McLean, in concluding his judgment, says: "Comparing the rates as charged with the rate of the local product and taking into consideration the mileage involved and the charges which have been borne at Montreal on the imported product, I am of the opinion that eight cents is a reasonable rate for the movement from Montreal to Windsor Mills."

Lumbering Operations Delayed

W. R. Smyth, M.P. for East Algoma, Ont., states that lumbering operations have been seriously delayed in northern Ontario owing to the lack of snow. The late fall and early winter were ideal for cutting the roads and getting the logs ready to take out, but the absence of snow right into January has held the work back and some of the men have been allowed to go. Other operators report that they have found labor very plentiful and that in many camps the maximum wage being paid since Christmas is one dollar per day and board.

Preparing for New York State Shingle Count Change

Since the adoption of the new shingle count regulation by the State of New York, several of the manufacturers of shingles in the State have been in touch with the State Sealer of Weights and Measures in connection with the new regulation in order that they may be in a position to observe its provisions fully when they become effective. As a result of the further consideration of the subject the following is a review of what the trade of the State are planning to do to meet the new regulations when they become effective February 1st next.

In the first place the regulation requires that shingles bundled other than 25 courses at each end of bundle be sold on comparative basis, thereto. That is, shingles bundled 25 courses at each end of bundle are to be computed as 250 shingles to bundle, and shingles bundled 23/24 courses are to be computed as 235 shingles to bundle, and such bundles must be stenciled 235 or a sales slip, ticket or tag shall accompany the bundle representing the count.

The 23/24 course shingles used in New York State are the White Cedars which come from Quebec and New Brunswick, where some 300 mills make them, and from these mills probably 90 per cent. of the three lowest grades, No. 1s, Extra No. 1s and Clear Whites are shipped to nearby consuming districts in Canada. The next better grade, Second Clears, is used in large and increasing proportion in the Canadian markets, and the greater quantity of the best grades, Clears and Extras, are sent to the New England States. In both New England and Eastern Canada this method of packing shingles, short count is the standard, and with the comparatively small proportion of output being shipped to New York State, none of the mills will change their method and put up 25/25 course bundles. It can readily be seen that to do so on certain grades and not on others would lead to endless confusion and trouble.

The argument has been presented by certain interests, that the consumer was being defrauded, by getting shingles 23/24 courses to bundle instead of 25/25, but it can easily be demonstrated that the consumer is getting full value for the price he pays for the 23/24 course shingles and that if the same shingles were packed 25/25 courses the consumer would have to pay a proportionately higher price to offset additional material, labor and freight costs. There is not nor should there be any "deception" in the sale of these short count shingles, for they are sold on their merits in competition with other shingles.

The only question is, the preference of the retail dealer for having the bundles marked with the figures 235, or for furnishing a ticket or tag with each lot of the shingles he sends out.

To this end quite a number of the manufacturers are enquiring as to the wishes of their customers in this matter regarding the method which will be preferable to the particular trade of each, it being understood that the manufacturers, where it is possible, can have the bundles stenciled 235, or, if preferred, leave off the figures so that the buyers may furnish ticket, or tag, or mark the bundles themselves.

Some manufacturers have also advised that after February 1 they will sell short count shingles on the basis of price for four bundles instead of making price per thousand, which will comply with the regulation.

Duration of Quebec Timber Leases

As a result of criticism of the Quebec Government's timber leasing policy, Mr. J. Hall Kelly, M.L.A., recently defended the government, saying that the leases were not to be considered perpetual. They were annual. The man coming into the province to invest money in lumber in these days did not become the sole owner of that lumber, but joint owner with the government. The government retained the right to change the rate of stumpage and the ground rent. In effect, the government said to the lumber holder: "We will allow you to take hold of a certain tract of land, provided you respect the regulations, pay the ground and stumpage dues, and observe any regulations that may be issued. You can take it for ten years. After that the license is renewable annually." This, said Mr. Kelly, could not be construed as giving the holder right of perpetual renewal. It could be cut off by the government in twenty-four hours after it had expired for the year. The land was not held in fee simple. In reply to the statement that surely a limit holder could insist on the renewal of his lease, Mr. Kelly repeated that the government had absolute right to cut it off, but admitted that it should exercise this right with discretion. He himself had had occasion to borrow money on limits obtained from the government, and he had always been asked, "What guarantee can you give that the government can not revoke your lease at the end of the year?" He always replied that he had no guarantee except the honesty of the government. As an instance of the power of the government, he pointed out that it could increase the ground rent or prohibit the exportation of pulp wood unless there was a mill in the province belonging to the company. At the same time he suggested that it would be a good idea if the length of time for which

a lease was given were twenty years or more—the average life of a bond. It would be much easier to interest capital in developing the limits, because there would be more security. He added that at present there are forty-one pulp and paper mills in the province, and that in a short time there will be more pulp and paper taken from the province of Quebec than from any other part of the North American continent.

A Record Flagstaff

The largest one-piece flagstaff in the British Empire was put into position recently in front of the new court house at Vancouver. The flagstaff is a product of the British Columbian forests, and is a flawless example of British Columbian timber. The pole is 213 feet high.

The tree was cut at Gordon Pash Lake, B.C., and presented to the Government of British Columbia. The tree, of course, was much longer than 213 feet. Its utility for flagpole purposes depended on having that length free from branches. As it grew in the forest it was as erect as a sergeant-major, in fact, very much more so. It was towed in a loog boom for two hundred miles to Vancouver, and drawn by night from the slip on False Creek along a straight road by a traction engine. In its finished state it weighs eleven tons. Before the carpenters had adzed and planed it into shape it weighed probably three tons more. Since last fall it has been seasoning and drying out to prevent its warping out of shape. Great care had to be taken in erecting the pole. A concrete foundation twelve feet deep was prepared to carry the weight. A derrick-pole nearly one hundred feet long had to be erected to lift it. At the first lift the centre came up and bent like a cane, but the ends of the pole refused to leave the ground until timber braces had been put round the pole and a martingale and wire stays adjusted to take the strain from the ends. After the necessary experiment had been made and the time came for the final lift, the signal was given to the engineer, and the donkey engine and winch slowly but unerringly lifted the pole from the ground and allowed the base to be swung into the concrete socket. The flagstaff is held in place by guy cables set in concrete beds at each corner of the court house lawn, and will stand for many decades as an example of what the forests of British Columbia can produce in the way of tall timber.

Our New Paper Market

There have recently been signed a number of contracts in New Zealand for newspaper to be shipped direct by boat from Canada. This will mean a great deal of additional shipping for Vancouver and will place the paper industry in general in this country on a much improved basis. Both the east and west coasts of New Zealand are using rapidly increasing quantities of print paper as well as other grades. There is every indication that British Columbia firms will be able to supply the bulk of the print paper to New Zealand and Australia. During the quarter ending September 30th, 1913, we shipped into New Zealand \$170,000 worth of news print together with some wrapping. In that country, we enjoy a preference of 20 per cent., which means that Canadian paper should practically control the market. Not only will this assist British Columbia mills, but it will take some of their production which has been coming east in competition with other Canadian mills, into other channels, thus relieving the pressure in the middle West.

New York Wholesalers Feeling Cheerful

Chase, Talbot & Company, New York, in their market letter under date of December 31st, say: The turning point has evidently been reached. Optimistic talk is freely indulged in, which of itself has long since been proven to be a fore-runner of fact. Corpses are strewn along our pathway, as a result of the fool-killer's activity, while his over-exertion has necessitated slumber in an obscure and unknown spot. Good cheer is the watch-word of the lumber trade to-day.

There have been some recent sales of eastern spruce, from which we quote as follows:—Random 3 x 7 and 3 x 8, \$25 to \$26; random 3 x 9, \$26 to \$27.50; random, 3 x 10, \$27.50 to \$29; random 2 in. ordinary schedules, \$22 to \$24; 2 x 8 and 2 x 10, \$25 to \$27; dimension specifications 8 in. and under, \$26; 9 in. and over, \$28; long leaf yellow pine merchantable, an average of about \$2 to \$3 per M. less than the price of eastern spruce; short leaf yellow pine an average of about \$4 to \$5 per M. less than long leaf; Eastern hemlock dimension, \$22 to \$23; Pacific coast Douglas fir timber, \$25 to \$26; spruce laths, \$4.00.

Abitibi Plant Making Good Progress

It is expected that the new 150-ton ground wood plant of the Abitibi Pulp and Paper Company, at Iroquois Falls, Ont., will be in operation by May next, and the machinery will begin arriving for installation early in the new year. A new hotel is being finished, which is thoroughly modern, and dwelling houses will be built for the married men. The company will have about three hundred men in the bush cutting pulp wood.

Talks With the Lumbermen of British Columbia

No. 5—By Douglas Fir

OF course we all know that supply and demand are the two dominating forces in the land to-day by which we are all governed to a greater or less extent. It seems to be one of the incontrovertible laws of nature that the thing which we want most is that which we cannot have in sufficient quantity to satisfy our needs, let them be imaginary or otherwise, except at extraordinary cost to us, and this law, administered under its present faulty interpretation, is the governing power which regulates our values to-day. A very forcible illustration of this is to be seen by those who have occasion to study the money market at the present time, and who can say that the conditions which have arisen in the last twelve months have not in a very large measure been brought about by the maladministration of the powers of this law?

I have before me a daily paper in which is an advertisement for a loan of \$5,000. The advertiser wants this money for a term of five years, and he offers to pay \$200 per month interest for the use of it, and of course pay back the principal at the expiration of the term. As this interest would under such strained conditions be taken in advance, this man does not receive \$5,000, but only \$4,800, as the \$200 is deducted for the first month's interest; thus he pays sixty monthly \$200 payments which make \$12,000, and if we compound these payments of interest monthly at the reasonable rate of 6 per cent. per annum we find that we have \$2,600 more, or \$14,600 in interest which this man is willing to pay for the use of \$4,800. This of course, even though it is not an isolated case, does not place a proper commercial value upon money, but only serves to illustrate to what lengths some men will go in a frenzied effort to stave off the evil day which is upon them. This man, let us hope is not a lumberman, but who knows? I believe there are lumbermen in this province who are paying just as high a rate of interest to-day as this man is willing to pay, but perhaps they do not realize it. They may not be paying half as much for their money, but they do not stop and figure out in a practical way, by the rule of applied logic, what is the commercial value of lumber. After all is said and done, lumber must have a value, and so it has, but we destroy that value ourselves by throwing away all our profits, and sometimes more than our profits, simply because we have not the ability or stamina to regulate the supply to the demand.

How To Discover The Selling Price

If we will figure out, by calculating minutely, and not by guess or conjecture, just what the various kinds of lumber cost when ready for shipment, then add to this the cost of shipping and a reasonable profit, we will arrive at the selling price. But how many do this? I know that most of us think we do, but are you sure that you have taken into consideration all the charges such as insurance, taxes, office expenses, supplies, depreciation, interest and discounts, with a proper allowance set aside for losses? If you have done this, then all you have to do is to add what is a fair and reasonable profit and you have the selling price. Have you done all this? If so have you maintained that price? If not, why not? In this figuring I have been dealing only with local sales. Obviously, where sales are made through agents, or brokers, an extra allowance must be made, but the question of how many commissions should be allowed on an order is a matter that should be considered more seriously than it is, as I think it is pretty generally admitted that there is room for reformation here. If some of our good friends will stop and figure this out carefully I think that they will find, perhaps to their surprise, that they have sold lumber as much as \$6 below actual value, and if they will figure this as interest, for it really amounts to the same thing, they will find that their rate is not much lower than that in the case instanced herein.

Of course we know that it is a natural propensity of some to look lightly upon discussion of this kind and say "that fellow does not know what he is talking about. Who would ever think of doing business without figuring these things out?" To such I will venture the assertion that if any twelve lumbermen in this province representing as many different concerns will undertake to supply the editor with figures as above described there will not be any three out of the twelve who will figure alike, or in the same way. This is no idle assertion, for I have talked with quite a number of mill men, and have compared figures with some, and I know whereof I speak. Now this is a state of affairs which should not exist, for there is no more important chapter in the whole book of knowledge pertaining to the business than this one of getting at the actual costs of what we produce, and the manager who overlooks it is like unto a shipmaster navigating

without his chart, and we all know how dangerous that would be. A man who does not know anything about navigation, and who does not understand the chart is not likely to be given charge of a ship. Neither should a man who does not know the lumber business undertake the management of one. Both are dangerous undertakings, and are likely to end disastrously.

Caution and Study Always Win

Let us take the case of Bill Jones and Tom Brown. They are each navigating a lumber business, and they have each one started out for a certain port called success. The waters are dangerous for navigating, and there are many rocks along the course, but Jones is an experienced navigator who understands his chart, and knows exactly where the dangerous places are. He of course sees to it that no leaks are caused in his ship. He watches his chart, and if he is in any doubt as to his latitude and longitude he slackens his speed and keeps an extra watch until the danger is past, and thus he makes a successful landing. Brown is not an experienced navigator, and he knows absolutely nothing about reading the chart. Therefore he does not know where the dangerous rocks are, but he plunges along, and bangs a leak into his ship here, and another one there, until, before he is half way along the voyage, he finds that his ship is taking water so fast that he abandons all hope of continuing the voyage, and is forced to beach her along the way. While he is waiting for the salvage crew to come to save what they can of the cargo he takes up his glasses and casts a longing look out over the horizon, and away in the distance he spies an object. It is Jones! Yes, there is no mistaking it, it is Jones! There was always something about Jones that was unmistakable—some mark of inferiority and in anything that he had to do with it could be seen, and even now it is plainly discernable about his ship. Yes, it is Jones. Confound him! He always seemed mediocre and slow, and never paid heed to any of our warnings, and if it had not been for my ship striking these rocks I could easily have left him so far behind that he never would have caught up. But fate was against me. I have listened attentively to all that the experienced captains had to say about the course I was taking, and I was led to believe that it was a safe one. Could they have been deceiving me? Anyway, here I am, and there goes Jones on safely past, and he is taking mighty good care that he does not hit the rocks which have stranded me. Just like Jones, he always was peculiar, but a fool for luck every time. . . . No Mr. Brown, you are wrong. Jones was not as much of a fool as you took him to be, and what you saw about him that seemed peculiar, and which you were not able to understand was his bump of capability to observe and understand the things about the business which you did not know, and upon which you placed little or no importance. Jones examined his own little ship, inferior though it may have seemed, very minutely, inspecting every part of it very carefully to see that there were no leaks anywhere, because these little leaks are the cause of many of our disasters, and some of them could have been so easily avoided! Yes, it does seem peculiar to see a man like Jones in the present day, and to the average manager he seems a rather narrow individual, but just the same, while many of us were standing out conspicuously and thought we were reviewing the great panoramic scene in a comprehensive way as it rolled out before our vision, I fear that some of us became so absorbed, or should I say bewildered with the magnanimity of our own comprehension that we forgot our chart completely, and we were bumping against rocks here and there, causing leaks and weaknesses which we had not discovered until we found our craft in shoal water and going with full speed ahead. It is now that we realize that something is wrong, but it is too late. Lord, what a calamity! And there's Jones, who never seemed endowed with startling comprehensiveness, sailing along in safety while we are on the rocks. Isn't it hell?

Bumping On The Rocks of Failure

Jones, Brown, et al. are engaged in the lumber business as manufacturers, and they, unlike their more fortunate brothers who are operating their own camps, have to go out into the open market for their logs. Brown has always, since his initiation into the mysteries, been a good listener, and a close observer of things pertaining to the industry generally, but the trouble has been that all his observations have been taken in a general way, and so focussed that he only views the scene in a panorama, leaving the details of the interests which he represents too much to fate, and then accuses fate of being against him. It has been the consensus of opinion amongst Brown's associates that the best logs that can be bought are the most profitable logs to use,

all of which is quite true, if the business we are getting demanded mostly high grade stock. Brown picks up the cue however, and instructs his office that in future nothing shall be purchased but high grade logs. Jones, who is catering to exactly the same trade as Brown, knows that this is a simple application of theory which will not work out in practice, so he sees to it that such logs are purchased for his operations as best suit his individual requirements. Thus Brown is buying only Nos. 1 and 2 logs, and paying from \$9 to as high as \$14, or \$15 for them, while Jones is using Nos. 2 and 3 logs, and filling exactly the same class of orders as Brown is handling. It is often said that you can get anything you want out of high grade logs, which is quite true, but is it right? Jones finds that by careful watching and handling he can pick considerable high grade lumber from low grade logs, and so he buys the cheaper log for general purposes, and only buys the more expensive logs when business demands it. Thus, while his logs are costing him about \$7.50 per thousand feet, Brown's are costing him about \$11.00. Brown, and others of his associates, who will use nothing but the best logs, create a demand for them, and as a consequence the price goes up \$1, \$2, \$3, and still they buy. They have bumped a rock. Next thing they discover is that there is a falling off in the demand for uppers, with its consequent weakening in price, and they are heavily stocked. They have bumped again. There seems to be considerable business continuing to come in however for lower grades, or dimension, and so, as in the past, they continue to fill these orders from their high grade logs, but now that trade for uppers is dead they are not so particular about picking out the clear. They have bumped again. Rush orders come in for dimension, and we rush them out of such logs. Bump we go again. Everybody

about the works is more or less careless about saving grades, because you know we cannot go wrong when cutting such logs as these, and getting more uppers out of them than the company is able to sell, for we have simply got the sales department buried. Bump again. The sales department is floundering under an abnormal load of uppers which has been piled upon it, and irregularities are occurring here which have been described in previous talks, and this is where we get the final bump that puts us out of business. Weakness in this department at the best of times, and when closely watched over by an experienced eye is an alarming symptom of approaching disaster, but when weakness is allowed to run unchecked, soon all kinds of complications set in and the end is known to be near. The astute buyer takes advantage of this weakness, and perhaps irregular sales are made and bad accounts are opened up; the privileges of the credit system are abused, and collections are either overlooked or forgotten. While Brown and his associates are demanding No. 1 logs and paying enhanced prices for them they are not only glutting the market with uppers, and thereby reducing the prices, but they are also leaving a surplus of lower grade logs upon the market and consequently making easy buying for Jones, who goes right on in the even tenor of his way. He is of course able to underbid on dimension business, because he is buying suitable logs for this business at \$3.50 to \$4.00 less than Brown has done, for in addition he studies to raise his grade, while Brown is lowering his. Jones is satisfied that it is not so much the volume of business handled that counts, as how it is handled. He may be a slower navigator than Brown, but he pulls through safely, and after all isn't that the main thing to be desired? (To be continued.)

Slash Burning Becoming More General

Western Experts Believe This Method of Destroying Logging Debris Will Become a Regular Part of the Operations—Observations of an Experienced Fire Warden

One of the most interesting addresses at the recent meeting of the Western Forestry and Conservation Association at Vancouver, B.C., was delivered by George C. Joy, Fire Warden of the Washington Forest Fire Association, who spoke upon the slash burning question. In part, Mr. Joy's address was as follows:

That the disposal of loggers' slashings by means of purposeful burning is the most practical, cheap and effective method, is the consensus of opinion of almost all of those loggers, timbermen, fire wardens and forest rangers who have to deal with this important phase of logging operations.

The necessity for the removal of this accumulation of inflammable material, annually, or if possible, semi-annually, is imperative and for two reasons, one of which is that the longer the burning is delayed the greater the hazard consequent upon the more extended area of land cut over where, when a fire does start, it is most difficult and often impossible to control, with the chances that a greater loss will result than if the burning be done more frequently with a less quantity of material to be consumed.

The other and more important reason is that it is impossible to keep fire out of these slashings long and I base this statement solely upon what observation and experience has taught me during the past twelve years in my work among the logging camps in Southwestern Washington. It has been my privilege to visit all of these camps most every summer and I have found one which has passed two successive seasons without a fire of considerable extent, and in most of them a fire occurred every year, which always resulted in more or less loss to the owner, besides often burning timber and other property.

Hence, my assertion that it is imperative that these slashings be disposed of by purposeful burning as often as possible, for they will burn sooner or later and when left for too long a season are liable to catch fire at a most inopportune moment when conditions are just right for a great conflagration. In the accomplishment of this work we should make sure that it is well done, for by so doing lessens the danger of another fire recurring there for several years to come.

This menace of fires on logged-off and burnt-over lands is increasing and will continue to do so, for every year more and more of the land is being denuded of its timber and unless the debris left from logging operations is pretty well consumed at the first burning, fire will run over it again and while the second fire may not burn so fiercely as the first, yet it has the chance of spreading over a wide area and will do so in a short space of time, requiring a long line of fire trail to control it, which is sometimes impossible. Such conditions prevailed in the vicinity of Pe Ell in Lewis County in 1911, where with seven or eight miles of trail we were unable to stop a fire on logged-off land, with the result that in the neighborhood of 75,000,000 feet of timber was burned.

There is little opposition amongst loggers at present, to the burning of their slashings, what there is comes principally from small operators who have forty, eighty or one hundred and sixty acres to log and who when they are through on these small tracts, move to some other locality and thus get away from the dangerous hazard they have created, leaving the responsibility of its disposal to others who are endangered by it. The large operator who is located where he is going to log for a term of years, knows full well from his experience that it is next to impossible for him to keep fire out of his slashings and so has adopted the best means at hand to rid himself of the increasing hazard by burning frequently and at times when there is little danger of his fire getting out from under his control.

In this matter of purposeful burning of loggers' slashings, the experience of the Washington Forest Fire Association during the past season has been such as to encourage us in the assumption that it is only a question of a short time when every logger who is operating on any considerable scale, will make this question a part of each season's program of operations the same as he lays his plans for any other part of the work.

Early in the season a circular letter was sent out to all logging companies urging them to do early burning of slashings wherever conditions would warrant. Our reports indicate that between 15,000 and 20,000 acres were burned, which greatly lessened the fire hazard during the summer.

In the latter part of August another letter was sent out on the same mission and offering the assistance of some of our men to supervise and aid in the work. The response to this was most gratifying and had the weather been as favorable as was experienced in September of last year, the large majority of loggers would have disposed of their slashings and I would be able to report a much greater acreage burned over than I am. With scarcely an instance did we meet with any objections to burning, the only difficulty standing in the way of getting this done, being that some operators were not prepared at the crucial time and were afraid to burn, for by doing so would have meant to run the risk of losing logs or camp equipment.

How to surmount this difficulty is a problem to the solving of which we must lend our best endeavors in order to bring about the desired unanimity of action on the part of loggers in preparing to do their burning when the right time comes in which a good burn can be secured, and unless a way can be found by which the slashing evil can be disposed of and at the same time eliminate the risk of burning logs or camp equipment, we will not attain to that degree of success in this line of work such as will insure the satisfactory safeguarding of property from this menace.

In the successful burning of a slashing more depends upon the time when this is done than upon any other one thing. No matter

what preparations are made for the burning it should not be attempted on a hot, windy day, for if this is done trouble is almost certain to ensue. In most instances the fires should not be started until after the wind has died down in the afternoon; then if you are prepared you can burn nearly any slashing with safety. As to where to set the first fire depends considerably on the direction of the wind, the topography of the ground and the location of property surrounding the slashing and which may be endangered by the fire.

Where a slashing lies on a side hill with timber on the slope above, the fires should be set along the upper side and allowed to burn away from the timber first before being started on the lower side, and, right here, I wish to make this suggestion to loggers who have slashings situated as I have just mentioned, that in case a fire gets started in

your works accidentally, and you are unable to control it, that you have some of your men fire the slashing along the edge of the timber, as this will prevent the fire from below going against the timber with such headway as to kill it. One such fire as this is responsible for the burning of ninety per cent. of the timber lost this year.

One cannot lay down any hard and fast rules governing the burning of slashing, for each slashing is a problem in itself, the successful burning of which largely depends upon the experience and good judgment of the one supervising the work. This should not be left to inexperienced men, for the hazard is too great. The necessity for cutting stubs can often be obviated by being able to choose the time for burning, but this can be done only where the operator has made preparations in advance so that he can burn any time.

Lumbermen Discuss B.C. Forest Service

Its Aims and Methods, Merits and Demerits Discussed at Vancouver Convention
—The Chief Forester's Defence of the Work

AT the annual meeting of the Western Forestry and Conservation Association held recently at Vancouver, B.C., one of the most interesting features on the programme was the series of addresses on the British Columbia Forestry System delivered by Mr. T. F. Paterson, of the Paterson Timber Company, Vancouver; Mr. Peter Lund, of the Crow's Nest Pass Lumber Company, Wardner, B.C., and Mr. H. R. MacMillan, Chief Forester for British Columbia. Mr. Paterson's address was as follows:

A few weeks ago the Forester of your association asked me to speak a few words along the line of the subject just announced by the chairman, and on looking into the matter I found that he had left to me a rather difficult task; and I have said just as little as I possibly could on the matter. I have with me a very short paper which may elicit some discussion by the members of the association as well as by the Forestry Department. The paper is got up with the idea to put the Forestry Department of the Province somewhat on the defensive; and Mr. MacMillan and his associates who are well able to take care of themselves, will doubtless perhaps criticise the paper somewhat severely it may be. But that was an understood thing that I be given carte blanche to say what I do, and to state what some of the Coast lumbermen's views are on the Forestry Department and also on conservation associations in general.

It is a somewhat difficult task to attempt a criticism of the policy and work of the Forestry Department, not yet two years old, in the Province of British Columbia. The province presents so many characteristics greatly different from many other countries which have long established forest policies, that some time covering a period of years must elapse before a settled policy, which will be satisfactory to a majority of the interests concerned, can be perfected.

There is a tendency on the part of the practical logger and lumber manufacturer to look askance at many of the methods put forward by conservation associations and forestry departments of governments, in the way of conserving the forests from fire or other kinds of destructive influences. It is argued, and in many cases with good reason, that many of the ideas promulgated along the lines of forest conservation, are those of theorists, and sometimes those of dangerous optimistic faddists. In many cases in associations such as this, theories as to how logging should be done so as to guard against fire and preserve the young forest trees which are left, are so impractical, when the subject is viewed from the stern viewpoint of finance, that it not only arouses righteous indignation in the minds of those who have to deal with the question from a practical standpoint, but makes him feel with the poet Pope that, "Fools rush in where angels fear to tread."

So far as the Province of British Columbia is concerned, the Forestry Department is sure to make experiments which will be found to work in theory, but not in practice; and conservation associations who imagine that all the methods adopted in other countries for the prevention of forest fires will work out in practice on the Coast of British Columbia will be disappointed. The Coast district of the Province is dissimilar to most other countries in three important particulars, namely: Climate, soil and physical features.

Owing to climatic conditions there are only four months of the year, May, June, July and August, in which there is any great need of precautions being taken to guard against forest fires. In the majority of seasons there are only three summer months in which there is any danger, and in a percentage, such as the year 1912, there was little or no danger from conflagrations on the Coast, owing to the rainfall throughout the summer months. It will thus be seen that the Forestry Department is called upon to provide a system which calls for a considerable staff, and which can only be profitably employed during the quarter or less of the year.

Owing to the gravelly nature of the soil on the heavily timbered areas of the Province, there is little fear of fire being kept alive for comparatively long periods. Fire, therefore, does not smolder for months only to spring up anew with the first high wind as is the case in many countries, where the forests grow on soil of a peaty nature. This is one of the principal reasons why there have been so few disastrous fires, as far as the destruction of green standing timber on the Coast is concerned. Most of the fires on the Coast occur on logged-over lands, and the writer has yet to see a case where a forest fire has done very serious damage to green healthy fir forests. There have been cases where lands covered with cedar timber have suffered, and in fir and hemlock which had been attacked by blight which had rotted the bark and sap. The great forest fires in the forests on the Coast of British Columbia originated in the minds of newspaper correspondents, whose grossly exaggerated statements as to the losses caused by fire in old slashings, have done a great deal towards depreciating the value of British Columbia limits in the minds of foreign investors. The writer has known many cases when the information supplied by deckhands on some of the boats plying between the Northern logging camps and the cities on the Coast has been the basis for lurid newspaper accounts of the enormous destruction of forest wealth, when in fact only some old slashing had burned on which the merchantable timber had been previously removed. In such cases sometimes serious loss occurs, to railroads, skid-roads running through logged-over land, or logging plants and down timber, but rarely to standing timber if in a healthy condition.

From information received from the Provincial Forestry Department, it seems a most elaborate system of forest fire prevention has been inaugurated. The Province has been divided into patrol districts with a district forester appointed to each. This official has, under the chief forester, full charge of his district, authorized to issue burning permits to settlers, hire patrolmen and fire guards, and make reports weekly or more often to the Department at Victoria. For the protection of the timbered area on the Coast, three large launches and eleven smaller ones are in operation during the summer months to convey men and fire-fighting apparatus from one district to another whenever the occasion requires. In the Interior and on the Coast a large amount of work has been done during the past years in the way of permanent improvements, such as the erection of telephone lines and the cutting of trails through the timbered areas. In all the sum of \$346,000 has been expended on forest fire protection by the Forestry Department, of which the Government pays half, and the other half was contributed at the rate of 1½ cents per acre from 8½ million acres held under special timber license, 1 million acres under timber lease, and 1½ million acres held under Crown grant. Considering the fact that the lumbermen contribute one-third of the revenue of the Province from rentals and royalty, it will be readily seen that they are shouldering the greater portion of the expense. It is a debatable question as to whether or not the Province is getting adequate returns for the money invested, even under the most careful management by the Forestry Department. From the instructions sent out by the chief forester to the various district foresters, it would seem that the department is making a special study of trying to get value for every dollar expended, and it largely depends on the integrity of the district foresters as to whether or not this is being done.

No serious complaints have been made by the lumbermen and public generally as to the extravagance on the part of the Forestry Department, as it is but new to the Province, and as yet but little interest is taken in the matter by the public in general. It is safe to venture the assertion, however, that even with the most careful measures adopted by the department, considerable money will be handed over in the form of what might be called political charity, to ap-

pointees who have to be rewarded in some way for political services to the members representing the district in which they are employed. When the writer is paying forest fire protection tax, he is reminded of the story of the Scotchman who, in contributing to the foreign missionary fund, enclosed a one-cent piece and a dollar bill with a note bearing the following instructions: "The cent is for the heathen and the dollar is to send it." Doubtless the waste in the Forestry Department will bear a closer relationship to the value received, but when everything possible has been done by those responsible to cut down expense to the minimum, there is bound to be a large expenditure for which no adequate returns can be received.

Re the permanent improvements such as roads, trails and telephone lines completed by the department last year, and on which \$150,000 was expended; different opinions are held as to whether or not much of this has not been an unwise expenditure. If there are to be trails cut up every valley along the Coast, and in cases on mountain sides and through limits which cannot be logged in the next twenty years, the cost is going to be enormous. Limits will be opened with trails which are in no danger from fire from mere inaccessibility to campers or hunters and the public generally. These trails in many cases will allow access to people who through carelessness may cause fires. Great discretion should be used by the department in cutting trails into limits containing small timber on mountain sides at high elevation. In one instance, according to the report of the department, a trail has been cut over the mountain range lying between Howe Sound and an arm of Sechlet Inlet. It is difficult for a lumberman to see why this should be done, or what practical use it can be in the way of fire protection. It is the opinion of lumbermen and loggers that, until a timber area on the Coast has become a fire risk from being in close proximity to logging or land-clearing operations, the less that is done in the way of cutting trails through it, the better. As to telephone lines, much money may be squandered on such projects if wisdom is not displayed, as to where they can be erected to do the most good.

There is another feature of the forest policy in which the department and the lumbermen are not as yet in accord. The special tax of 1½ cents per acre is taken from the latter, and they have as yet little or no say as to how it should be expended. Were it taken from the government treasury there could be no disagreement as to the department's authority to spend it as they saw fit.

It seems to be the consensus of opinion among the taxed, that there should be a committee appointed by the timber, logging and lumber manufacturing interests, to confer with the Forestry Department as to how and where the money collected for forest protection should be spent.

It is thought by many, that more co-operation should exist between the department and those engaged in the logging industry, in the way of employing men who work in the different camps on the Coast for the purpose of fighting fires. It has been suggested that the superintendent or foreman of each camp should be made a member of the forestry staff, with power to take the men employed under him and use them in fighting fire and such work, to be paid out of the forestry fire fund. The entire logging camps of the Province would be well covered, and many fires put out in the early stages which might become serious, before the district fire ranger could reach the spot with sufficient men to cope with it. This is a phase of the question which will bear considerable discussion, and if such an arrangement as the above can be made, it would do away with a large expenditure by dispensing with the majority of the Forest Department staff, who have to be kept whether or not there is work for them to do. If it is imperative that a considerable staff should be kept the writer would suggest they be employed certain portions of the year burning over old workings which have been abandoned. By doing this it would put the land in good condition for a volunteer crop of hemlock, spruce or balsam.

However, as time elapses, arrangements can be made whereby co-operation between the Forestry Department and lumber interests can be carried to such a point, that the greatest efficiency can be obtained from the forest fire staff with the minimum of cost.

I just offer these few suggestions, Mr. Chairman, and before saying anything further along that line I would just like to say a few words in general about conservation associations—present company is always excepted. We have had at times in this country—some associations—known as conservation associations which at times seemed to be dominated to some extent by mere theorists, who I believe go so far as to try to make us believe that we should conserve the whole forest for all time to come, and try to get some material to take the place of wood. Now there has come to my notice during the last two or three days a copy of a paper which we in the Dominion of Canada know well and which is entitled "Conservation." It is a monthly bulletin published by the Commission on Conservation in Ottawa, and would you believe it, Mr. Chairman, that with the November number the authorities who are getting up the paper or the editor, has gone conservation mad, we might say. In sending out this number of

"Conservation" he has enclosed with it a lurid picture of the terrible effects of putting a shingle roof on houses. This is carried all through the Dominion of Canada and would lead us to believe that they are so terribly in earnest in conserving the forests of this Province that they will go so far as to advertise along with their paper an advertisement from a firm who has a kind of patent roofing and this firm is showing the general public the terrible danger of using cedar shingles. Now, Mr. Chairman, I would say that if that is not conservation run mad I do not know what you would call it. When a lumberman, who has to come up against the extension of his markets in all parts of the world and is asked from time to time to give financial and moral support to conservation associations, as we have in this case from time to time been asked to support this association, I may say that it almost makes my blood boil to think that we have in this paper used as a medium to circulate an advertisement for an opposition firm in trying to do away with shingles as a roofing proposition. Now I may say as far as the general public is concerned in the Province of British Columbia, we have not thoroughly awakened to conservation, as conserving the forests here to any great extent is left mostly to the Government and the lumbermen and the Forestry Department. We are young in the business but I believe that our Forestry Department will improve as years go on. One of the points I notice in the report of the Forestry Department is that there has been a large expenditure in what is known as the Okanagan District of the Province, in the way of cutting trails and roads through timber areas there. I do not know whether these are of value or not. It would seem that we are called upon to provide a large expenditure in order to conserve some forests up in the Okanagan so that the water supply for irrigation there may be conserved. I hardly think that this is in line with what the department's policy should be. If these people are going to have their water conserved for irrigation purposes they should be willing to pay part of the costs. My time is up, gentlemen, and I have only thrown out these suggestions in order that there may be discussion. A great many of the lumbermen are in accord with the sentiments of my paper, and there are others who are not in accord and it will bear considerable discussion. It was for that purpose it was written, and if you wish to jump on me with spiked shoes I am here to take whatever is handed out to me.

Mountain Lumbermen's View

Peter Lund of the Crows Nest Pass Lumber Company of Wardner, B.C., in presenting the attitude of the lumbermen in the Mountain District on this subject, spoke in part as follows:

I feel very keenly personally on the matter—on any matter that borders on the question of conservation, and it is therefore that I finally consented to respond. There has been so much said here and so many other papers read on the forest fire question, the experiences and knowledge gained by a number of very able and intelligent young men, that it is really unnecessary for me to elaborate on these questions. Therefore what few remarks I have to make must be along the lines of generalities, and I want to ask your pardon if I depart for a few brief moments from the usual procedure of hard-headed business methods and take up what may be termed a sentimental or emotional side of the question.

I have been delegated by my associates and friends in the mountains of British Columbia to say something at this conference, the programme of which I notice is headed "A Forest Fire Conference." Further down the headlines, I notice the word "conservation."

To prevent the destruction of our forests by fire, we must admit, is very important indeed, but had this conference been called exclusively to discuss forest fire problems, it might be looked upon as more or less of a selfish measure on the part of those engaged in the manufacture and sale of lumber and timber products, the owners of standing timber and our different administrative bodies or governments, especially that of the province of British Columbia which does now and intends in the future to derive from its forests tremendous pecuniary benefits.

The word "conservation" having been inserted in the headlines of the programme, undoubtedly shows that the promoters of this organization were men capable of deeper thought, broader vision and higher ideals than would accrue from any pecuniary motives.

In dealing with the forest fire problem the first thing to do is to acquire and establish means of preventing forest fires from being started, which is largely a question of administration, organization, efficiency and application, in connection with which the question of costs will enter as an important factor. At this stage, therefore, it becomes a mathematical problem from a material standpoint in order that the end may justify the means.

The organization of a forestry department in this province and its development has been watched by all lumbermen in the interior with considerable interest, and I can say that the results achieved have been most gratifying to us. Of especial value has been the enormous development of the fire fighting force maintained, on whose work Mr. McMillan will no doubt give us some statistics.

Regarding the proposed legislation of increased royalties in

British Columbia. I cannot quite agree with the views held by the Honorable W. R. Ross as expressed in his speech of February 10th, 1913. Mr. Ross states that "statistics show that the average price for lumber in Canada to 1909 had risen faster than in the case of any other group of commodities except furs, and we all know there has been considerable increase in the three years since then." It might be interesting to review these statistics to which Mr. Ross refers, since our company has been in business for a good many years and I have yet to find any increase in the net prices of lumber that were not prompted by increased cost of logging or milling.

I feel strongly that the government of any country should adjust its taxation according to the ability of industries and citizens to meet such payments. I know that the honorable minister has perhaps changed his views somewhat, since his trip through the mountains during last Fall has no doubt proved to him conclusively that operations are not profitable to investors.

We in the mountains feel that the average stand obtained does not at all compare with the heavy stand obtained at the Coast, and that the ground rentals charged in the interior are too high when compared with the Coast district. I feel that about one-half the amount charged to the Coast would be fair in the interior. This argument has been advanced several times that mountain mills being more closely situated to the prairie market hold the advantage over Coast mills. This however, has never benefited any of the mountain operators since vast importations of lumber from the United States and Manitoba and Saskatchewan mills as well as the Coast, have been the sole factors of determining prices for our product. On the other hand we have never been the sole factors of determining prices for our product. On the other hand we have never been able, and no doubt never will be able, to share in the lucrative export business carried on by Coast Mills for their higher grades of lumber and marketing their common grades in the prairie market in competition with mountain mills, whose sole output, practically, consists of lower grades. I feel that the large revenue derived from the lumber industry in royalties and rentals has been far in excess of any revenue derived by the government from any other industry. Thousands of men are being employed constantly by this industry, and any adverse legislation would be a very serious matter for the province. This point was never more truly illustrated than during the past year, when so many of our mills have been closed down and great numbers of men are unemployed and are leaving the province to seek work elsewhere.

The legislation affecting lumber royalties has not as yet been decided upon so that it is to be hoped the government will see the justice of our contentions and prepare a bill which will be equitable and fair to all interests and that interior lumbermen will be sufficiently reimbursed for their many disadvantages.

The table of royalties and taxation received from the lumber industry for thirteen years ending 1912, clearly indicates the vast amounts derived by the government from this industry, and more than ten times pays for the expenses incurred for the administration of the forestry branch of the department of lands. During that period royalties alone have increased, I believe, over five hundred per cent.; the increase in 1912 over the previous year, if I am correctly informed, being about fifteen per cent.

The Government's View

Mr. H. R. MacMillan, Chief Forester of the British Columbia Government at Victoria, B.C., delivered a masterly defence of the attitude of the Government in its Forest Policy. Mr. MacMillan spoke as follows:

Mr. MacMillan's Paper

After listening to the addresses of Mr. Paterson and Mr. Lund which dealt with the manner in which conservation and fire protection is carried on in British Columbia and especially the great need for this important work, I feel that the only thing that I can do is to state our problem in order that you, and especially those of you who are lumbermen in British Columbia, may see it as we see it—see it right—and co-operate with us in directing the administration from year to year. Our first problem is that we have 250,000,000 acres here in British Columbia of forest land—practically all forest land. We have a small population of about 200,000 outside of the cities and towns, scattered through this area. This forest land is our greatest Provincial asset. We have this to protect with a fund of about \$350,000 which is equally provided by the lumbermen and the Government, the theory being that co-operation in the ownership of the timber calls for a division in the expense and responsibility of protecting. We know that the timber is exposed to danger from fire. I cannot agree with Mr. Paterson when he says that the Coast timber will not burn. I would only have to take you up the Coast to his old logging operations to show that it will burn. Every camp of his on the Coast is surrounded by fire-killed timber. There are other operations here on the Coast where there are large areas of fire-killed timber. There is not only the timber itself to protect, but scattered through the timber are hundreds of thousands of dollars' worth of logging equipment, some of which is burned up every year. This is in itself a reason why pro-

tection must be maintained at any cost. I cannot believe that Mr. Paterson's ideas as to the origin of forest fires being chiefly in the minds of newspaper correspondents could be derived from his having acted at one time as editor of one of the Vancouver papers. In undertaking this big job of fire protection which I think is one of the most difficult jobs in North America, we have fortunately not had to depend on our own experience. If we had to go on with no further assistance than our own intelligence and initiative we should probably have tried to put in practice theories which would not work out, but we had only to look around and see the example of other governments, and last but not least of the men who comprise this association, the members of which are probably the greatest experts in forest protection in the world—men who experiment with their own money and their own timber; and no man can keep that up unless he is an expert. The experience which they have given us—and they have given it generously—has been that fire protection depends on legislation to successfully prevent fires. It is better to educate the public to prevent and extinguish small fires and to put your country in such shape that when you meet a bad fire season you can get your organization to the fire before it is too big. As your Forester has well said, one man can put out 100 small fires easier than 100 men can put out one big fire. We have legislation which controls the setting of fires by a permit system. This is a great protection—the greatest one we have here in British Columbia. This legislation requires that every man who sets a fire shall get a permit from a member of the Forestry Branch. Our legislation also protects against fires from railroads. There are probably not many people here who know that there are now under construction in British Columbia 1800 miles of railroad. If it were not for the legislation which gives us the power to put men on to prevent fires and charge the expense to the railroad there would not be much timber left on the land opened up by the railroads. The second part of our general policy after the legislation is the patrol. We find it necessary to patrol practically the whole settled area of the Province. I will admit that a large number of these patrol men are not on the timber licenses. If you will consider this, as the country lies the timber licenses are practically on the greatest fire hazard. If we control the fire hazard properly the timber is safe. In a good many cases that is successfully done. The construction of general improvements has been referred to. We spend between a year and a year and a half in the study of a general situation before we undertake any improvements. These improvements are rendered necessary by the character of the country. They are located chiefly with the idea of increasing the efficiency of the patrol. Secondly, to enable us to mobilize our force readily and cut down the general expense, such as look-out stations, etc. Before this audience I need hardly argue the benefit and wisdom of constructing permanent improvements for fire protection purposes.

I wish to return to our general policy which is that the fire protection is carried on by the Forestry Branch first by legislation which will so far as possible reduce and control forest fires; and secondly by a patrol which so far as money will go, covers all fire hazards. Third, that we accumulate from year to year—in a favorable weather year—funds which will be spent as wisely as possible to make our forestry department more useful in after years. Mr. Paterson mentioned the construction of permanent improvements in the irrigation district. That was considered very carefully before action was taken. There are timber licenses in that district and the timber is of great value. The work was taken up and done in connection with the municipalities. It was done in this way to protect the fire protection fund in which the lumbermen share. I believe that this policy is acceptable because we have had co-operation—effective co-operation and assistance—not only from individuals but from municipalities and most of all we have had assistance and advice from lumbermen. In a large proportion of the work we have done up to date we have had not only financial assistance from lumbermen but applications for such work and have been strongly advised by the owners of the timber that if we could see our way to carry on these improvements after having considered the whole programme which must be undertaken that they would be very glad to have us do it. In any case, however, I can assure Mr. Paterson that where the timber man is afraid of putting a trail through, if he will take a chance we will take it.

A general criticism has been that if we are not careful in the administration and supervision of our work and not careful in our payments we will waste money. That is true of any organization. One thing to be said is that we do not spend a dollar under cover. Every one of our patrol men is visible to the community. Every bit of our work can be readily seen and inspected. The operators in most cases know what we are doing, where we do our work, how we supervise it and what it costs us.

I want to say that in any case any man who has an interest in the fire protection and who believes that he can assist us by talking to us, advising us and in this way improve the efficiency of our work, or believes it has not been done right, if he will come and tell us so we will appreciate his assistance.

Larger Sales of U.S. National Timber

Annual Report of Forester Shows Increase in Quantity Disposed of and Amount Cut—Interesting Details of the Year's Work

MUCH interesting information is contained in the annual report of the United States Forester, Henry S. Graves. The report calls attention to a substantial increase in the amount and value of timber cut from the national forests, and a still greater increase in the amount and value of timber sold, largely for future cutting. The gain in timber actually cut was 15 per cent. over the preceding fiscal year; in sale receipts, 27 per cent.; and in amount of timber sold, 167 per cent. In 1913 the total sales amounted to more than two billion board feet with a stumpage value of nearly \$4,500,000, as against less than 800,000,000 board feet with a stumpage value of \$1,600,000 in 1912.

The increased sales were made up partly of relatively small contracts for local use, but many large contracts were let for inaccessible areas whose product will be marketed in the principal consuming regions of the United States. Twelve large contracts were approved for an aggregate total of 1,552,398,000 board feet. The most important of these was a sale of 800,000,000 feet on the Sierra national forest, California, consummated after two years spent in estimates and negotiations. This sale well illustrates the policy pursued in developing inaccessible forest districts. Approximately 70 miles of railroad must be constructed into the Sierra forest, together with a complete mill and logging plant. Twenty-two years are allowed for the removal of the stumpage, with provision for readjustment of the price at intervals of five years. Sales under similar terms were approved for 345,000,000 feet on two other national forests.

The main causes of increase in timber sales were: The partial recovery of the lumber market from the depression of 1909-11; the policy of making large sales which has encouraged substantial companies to seek locations in national forests; and the general stimulus to business in the west, due to prospective transportation by the Panama Canal.

Idaho White Pine First in Demand

First in demand is the white pine timber of northern Idaho, now widely used to supplement the white pine forests of the Lake States. Second only to this white pine is the demand for sugar pine in California and for the western yellow pine in California and eastern Oregon and Washington. The demand for Douglas fir on the northern Pacific coast has been less active on account of the enormous amount of private stumpage. There are, however, increased sales in western Oregon and Washington. The demand for western red cedar throughout the northwest generally is very active, both for poles and for shingle stock.

After discussing the aims of the forest service in making sales the report says that it has been urged that the government should, through low stumpage rates, force timber upon the market and thus reduce the price of manufactured lumber. The present policy, however, can not be changed without a change in the law. No such change is called for, says Mr. Graves. Sacrifice prices, unwarranted by actual market conditions, would reduce the returns to the public and to the states, but they would not reduce the price of manufactured lumber to the consumer. In the United States 99½ per cent. of the timber cut comes from private lands. Competition in production is exceedingly keen. The mill capacity of the country is considerably greater than its normal consumption of lumber. This creates a constant tendency to produce more lumber than the market will take. During a period of depression actual overproduction appears. Stock on hand mounts up; price concessions to attract purchasers fail to bring the hoped-for acceleration of sales, and as returns fall below the cost of production curtailment is forced. From 1909 to 1911 many sawmills operated at an actual loss because carrying charges on their indebtedness would not permit them to close down. One hundred and thirty mills in the two leading lumber-producing states were altogether idle in 1909. So long as competitive conditions obtain among manufacturers the lowering of national forest stumpage rates would neither benefit the consumer nor appreciably affect the supply of lumber on the market. One-half of 1 per cent. of the total cut is too small a fraction to have any influence on prices; and although this fraction might be made several times as great as it is by offering government timber at a merely nominal charge, the effect would be simply to throw money away to procure the cutting of public timber in place of private.

Close Utilization Provided For

Problems concerning the most effective utilization of national forest timber are being studied. Such are the reduction of waste through closer manufacture and the production of distillates or other by-products, the extracting of naval stores as an accessory to lumbering, the use of inferior lumber species for the manufacture of paper, and the promotion of new or more valuable uses for particular species

through preservative treatment. One of the most significant of the recent developments in national forest sales is the demand for various western species for the manufacture of pulp and paper. The forest products laboratory has demonstrated, through experimental runs of pulp and paper and tests of news print in actual use, that many western conifers are well adapted for the manufacture of news print and other standard grades of paper. These are particularly the red fir of California, the Engelmann spruce and lodge-pole pine of the Rocky Mountains and northwestern states, and the Sitka spruce and western hemlock of the northern Pacific coast and Alaskan forests.

Exceedingly valuable and practical results have also been obtained through demonstration of the desirability of telephone poles cut from the lodgepole pine and treated with preservatives at the butt. The supply of western red cedar, hitherto the standard pole timber of the west, has become greatly diminished. In consequence, market prices are high, particularly in the Rocky Mountain region, where the cost of long freight hauls must be added to the first cost of the timber. It has been shown that lodgepole pine poles are stronger than cedar poles of the same dimensions and, with preservative treatment, considerably more durable.

Needs for Future Work

The increasing volume of timber sales carries with it increasing costs to estimate the timber, to transact the sale, and to supervise the cutting operations. During the year timber cruising was extended over 3,867,627 acres of national forests. This work involves an estimate of the standing timber, the most practicable methods of exploitation, the extent and character of young growth, and other matters which affect management. A total of 17,512,342 acres of national forest land, or about one-eighth of the timber area, has now been cruised.

Calendars and Souvenirs

Hobart & Company, dealers in hardwoods and North Carolina pine, 53 State Street, Boston, Mass., have sent to their friends in the trade an attractive leather bill fold and change purse which is sure to be a welcome souvenir and a useful trade promoter in the company's interests.

Hoffman Bros. Company, Fort Wayne, Ind., have sent out an interesting little calendar for the year 1914. A series of half-tone reproductions, showing the exterior and interiors of their plant, make up the decoration of the calendar and give an excellent idea of the capacity and equipment.

An attractive calendar for the year 1914 has been sent out by the J. B. Snowball Company, Limited, Chatham, N.B., to their friends in the trade. A number of logging, manufacturing and shipping scenes are reproduced from photographs upon the calendar. Each of the scenes represents an important stage in the lumbering operations of the J. B. Snowball Company, Limited.

A calendar which will be very welcome to lumber offices, on account of the splendid colored picture of the "Burling Scene" has been sent out by Mickle, Dymont & Son, Barrie, Ont. The calendar is a large one, well suited for office purposes and shows the quarters of the moon. The picture represents two men on a large floating log enjoying themselves to the full at the sport of revolving the log and still keeping their balance.

A splendid large calendar for the year 1914 has been sent out by Geo. Gordon & Company, Limited, Cache Bay, Ont. A fine colored picture entitled "Glories of Life's Eventide" is shown above the calendar, and the pad is a large and very useful one, being especially adapted for office purposes. It shows the quarters of the moon and contains on each sheet, not only a large calendar for the current month, but a small one for the months immediately preceding and following.

The Fred S. Morse Lumber Company, Springfield, Mass., have again sent out a calendar for the new year, along the distinctive and unique lines which they have adopted in previous years. The calendar consists of a separate sheet for each month, printed upon handsome buff tinted paper and surmounted by a little group of maxims for each month. The printing of the calendar is extremely attractive and the colors, brown, green and buff, are delightful to the eye. This calendar is sure to be given a distinct place in every office which is fortunate enough to receive a copy.

The Hocken Lumber Company, Limited, Otter Lake Station, Ont., manufacturers of hemlock, have sent out a very attractive calendar for the year 1914. The date pad is printed in large type and contains information regarding the quarters of the moon, and religious and other holidays. An attractive colored picture representing a scene in the woods is used to decorate the calendar. The picture shows a group of men seated around a small fire, while behind them is a sleigh-load of logs and in the background a bit of woods with the moonlight showing through the tree tops.

Great Results from a Modest Beginning

Story of the Growth of Wm. Rutherford & Sons Company, Limited, and The Dominion Box and Package Company, Limited, Montreal—Their Systematic Business Methods



Thomas J. Rutherford, President.

LIKE many lumber firms, the William Rutherford & Sons Company, Limited, Montreal, had a very modest beginning. The business was started in 1856 by the late William Rutherford, father of the present officers of the company, at the corner of Dorchester and Drummond Streets, and was afterwards removed to Point St. Charles, and from there to Chatham Street. Finally, it was moved to its present location on Atwater Avenue, occupying two blocks bounded by Notre Dame Street, Atwater Avenue and Levis Street, and extending back to the Lachine Canal banks. Each year has seen a little more building done or a little more space used to keep up with the ever increasing volume of business.

The company are the owners of the largest combined business of wholesale and retail lumber, planing and saw mill, and interior finish in Eastern Canada. It may fairly be claimed that the name of Rutherford is synonymous with "lumber and millwork," and the work of the firm can be seen in most of the principal office buildings, schools, churches, theatres, and apartment houses in Montreal.

The following are a few of the interior finish contracts recently carried out by the firm:—Ritz Carlton Hotel, New Windsor Station, C. P. R.; New Place Viger Station; Linton Apartments; Strathern School; Evans Court Apartments; Sohmer Building; Sauvegarde Building; Royal Trust Building; Reed Building; Imperial Theatre, and St. Andrews Church.

Of late years, to keep pace with the rapid growth of Montreal, special attention has been paid to builders' supplies and stock millwork for immediate delivery. This service has been a boon to the speculative builder, who can never wait for his goods to be made up, and to whom quick delivery means money. The extent of the trade may be gauged by the fact that the company carry in stock about 20,000 hardwood and softwood doors, in addition to heavy stocks of window frames, sash, cupboards, cabinets, stairwork, posts, columns, mouldings, beaver board, roofing, tar and sheathing papers, etc.—in fact, every requisite for this line of commerce. They are agents and representatives in Eastern Canada for the Paine Lumber Company of Oshkosh, Wis., makers of the well-known Korelock Hardwood and Klimax Softwood Doors.

The yards, planing mill and the general interior finish factory cover a very large area. This main building is 3 storeys high and well lighted in every portion. Two elevators render the handling of



Andrew Rutherford, Vice-President.



Wm. Rutherford, Sec.-Treas.

material a mere detail. The plant is laid out for the economical manufacture of all kinds of wood products. The total force employed is some 500 men, of which 100 are joiners. The factory is equipped with a sprinkler system throughout.

The kiln for drying the lumber is located near to the lumber piles and a little distance from the main factory. It is in two sections:—In the first, free steam is circulated through the lumber to extract any acid which otherwise would stay in the lumber, if it were only subjected to dry heat. After remaining in the free steam kiln for some hours, the trucks are run out on rails (which traverse the entire double section) into the section, where ordinary dry heat is circulated.

From the kiln the lumber is distributed to the moulding and planing mill or sash and door department. That which is not required is sent to a storage shed where it is culled, sorted and racked. The mill is equipped with all the most modern woodworking machinery, such as band saws, matchers, surface planers, dimension planers, rip saws, and boring machines. Air lifts facilitate the easy handling of dimension timbers which have to be machined, and also enable the timbers to be loaded on to rigs for delivery or put through to other departments for further operations.

Lay Out of Main Building

The ground floor of the main building comprises the planing mill and moulding departments, where numerous high speed machines are kept continually running. The first and second floors are laid out for the economical manufacture of goods and in such a way that handling of the raw and finished product is reduced to a minimum.

On the second floor, is located the glue room and press room,



Stewart F. Rutherford, Director.



E. Dickson.



L. W. Halliday.



Wm. Dube, Superintendent.



The Wm. Rutherford & Sons Co., Ltd., Montreal, Charlevoix St. store shed.

for the manufacture of veneered work. The stair building department is also on this floor, completely equipped with modern machines run by dynamos. Here all parts necessary for the complete manufacture of stairs are made ready to erect on the job.

Adjoining the stair department is the paint and finish shop, where such goods as require it are treated. The factory has two very efficient blower systems, one for shavings and the other for sawdust. Part of the shavings goes to feed the boilers and part is baled by a baling machine and sold to the stock yards and to farmers for bedding for cattle, etc. The sawdust is conveyed to a separate bin, from which it falls down to the ground floor, where it is bagged and sold, there being a good demand for this product.

The boiler house contains five boilers, and the engine is 250 h.p., supplied by Laurie Engine Company, Montreal. There is also a small electric plant for illuminating purposes and for running a portion of the machinery. When repairs are necessary to the boilers, temporary dynamos are installed and the plant is operated as usual. An air compressor supplies the air for the lifts and also for cleaning the factory.

The machinery in this plant has been supplied by the following firms:—H. B. Smith & Company, Smithville, N.J.; The Berlin Machine Works, Hamilton, Ont.; S. A. Woods Company, Boston, U.S.A.; Connell & Dengler, Rochester, N.Y.; McGregor, Gourlay Company, Galt, Ont.; E. B. Hayes, Wisconsin; Greenlee Bros., Rockford, Ill.; Robinson & Son, Rochdale, England.

The raw products and lumber come in by barge and by Grand Trunk and Canadian Pacific Railway, sidings of these two lines running into the yards, so that the loading and unloading facilities are unexcelled.

The company always have on hand large quantities of hardwood for manufacturing purposes, in addition to the ordinary grades of lumber, of which millions of feet are continually stocked.



The Wm. Rutherford & Sons Co., Ltd., Montreal, Atwater Ave. store shed.

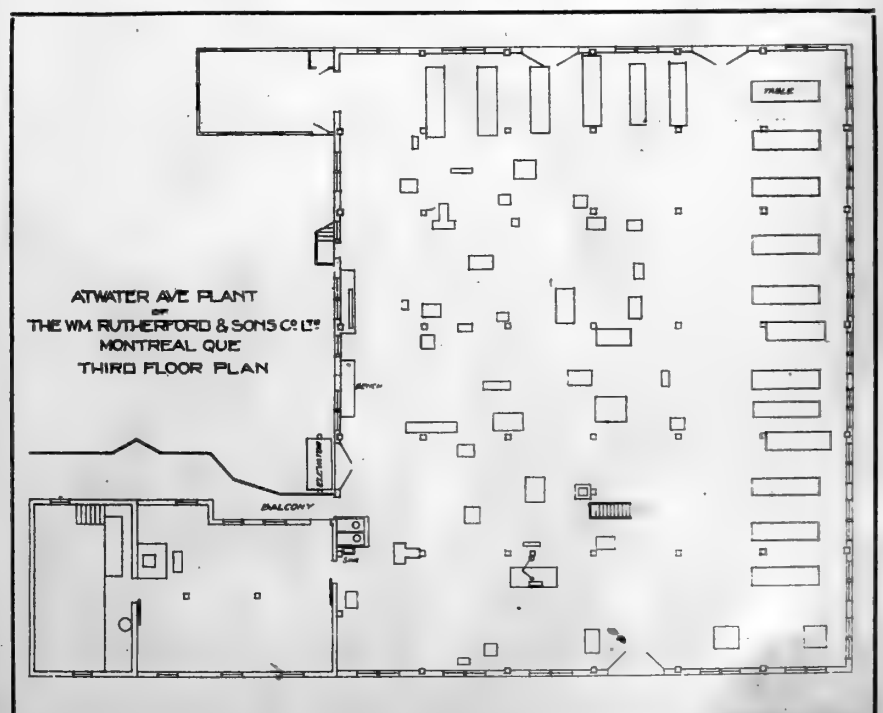
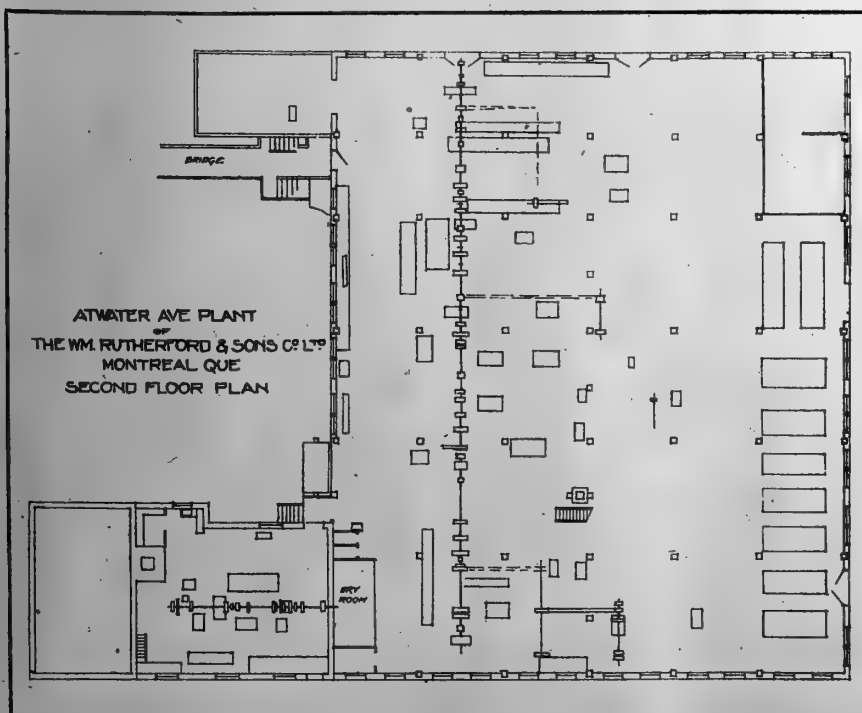
The stock millwork and builders' supply business is kept separate from the manufacturing end of the business, and is located in a large two-storey warehouse on the opposite side of the road from the main plant. This immense warehouse is about 100 ft. x 300 ft., and the ground floor is used for storing prepared hardwood, dressed lumber and mouldings, while the upper floor is stocked with thousands of doors in a variety of designs and woods, cupboards, stairwork, windows, etc., for immediate sale and delivery. Reserve stocks are carried in another huge warehouse, located on the Lachine Canal bank and Levis Street.

The company's stables where about 50 horses are housed, are located about one block away from the plant. In addition to the horses, three "Albion" motor trucks are used. Trucks were first employed about two years ago, the company being the first lumber firm in Montreal to invest in this mode of traction. These trucks have proved both durable and economical and it is probable that they will to a large extent replace horse haulage in the very near future.

The company also operate their own blacksmith shop, build and repair their rigs and auto trucks and make all repairs and extensions to the plant.

Two branch yards are operated, one at Outremont, and the other at Mile End, in the north end of the city, adjacent to the Canadian Northern Railway's Model City.

The officers of the company are as follows:—Mr. Thos. J. Rutherford, president; Mr. Wm. Rutherford, secretary-treasurer; Mr. Andrew Rutherford, vice-president; and Mr. Stewart F. Rutherford, director. The wholesale and retail lumber department is under the direct supervision of Mr. Thos. J. Rutherford, with Mr. E. Dickson as assistant, while the interior finish, millwork specialties and general factory is under the supervision of Mr. Andrew Rutherford, with Mr. L. W. Halliday as assistant, and Mr. Wm. Rutherford as secretary.





Plant of the Dominion Box & Package Company, Montreal.

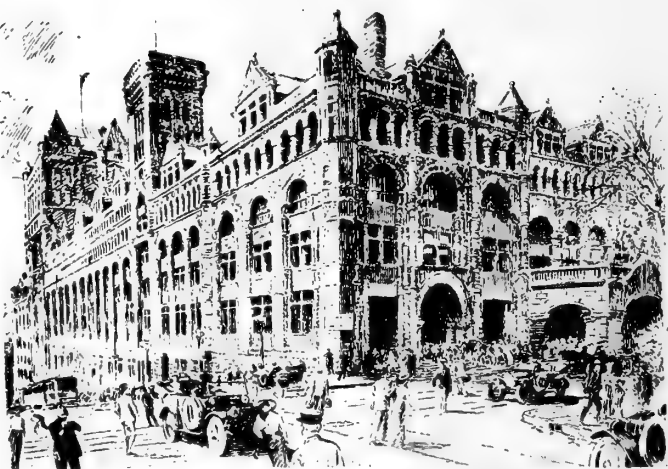
treasurer, looking after the financial department. Mr. Wm. Dube, the superintendent, has been employed by the company for 23 years, from stairbuilder to his present position. Mr. Oscar Dube, brother of the superintendent, is assistant foreman, and has been with the firm for 16 years.

Mr. Thos. J. Rutherford is a native of Montreal, where he was born in 1858. He commenced his business career with his father in 1874, and afterwards became a partner in the William Rutherford Company (now known as the William Rutherford & Sons Company, Limited). Mr. Rutherford is a life governor of the Montreal General and Western Hospitals, a member of several friendly societies, and Royal Arcanum. He is generally conceded to be an authority on all matters pertaining to lumber.

Mr. Andrew Rutherford also commenced his business career with his father, in 1881, being later taken into partnership and has served in all practical positions in the company from apprentice and successively as foreman and superintendent. He is a member of several friendly societies, and a life governor of the General and Western Hospitals.

Mr. William Rutherford is also a native of Montreal, and was born in 1864. In 1892 he joined his father's firm, and a short time later was taken into partnership. Mr. Rutherford has taken an active part in local affairs, particularly in commercial societies and the civic life of Westmount. For many years he was alderman and in 1911 was Mayor of that city. He is a member of the executive committee of the Canadian Manufacturers' Association, and also represents the lumber and millwork interests on the Builders' Exchange. He is a governor of the General and Western Hospitals, and Protestant Hospital for the Insane, Verdun, besides being a member of the St. Andrew's and Caledonian Societies.

Mr. Stewart F. Rutherford, besides being a director of the William Rutherford & Sons Company, Limited, is managing director of the Dominion Box & Packing Company, which was incorporated to take over the box business of the Wm. Rutherford & Sons Company, Limited.



Windsor Station, Montreal—Interior Finish supplied by The Wm. Rutherford & Sons Co., Ltd.

Dominion Box & Package Company, Limited

Allied with The Wm. Rutherford & Sons Company, Limited, is the Dominion Box & Package Company, Limited, the operations of which are carried on in a mill occupying about one-third of the former company's premises. It is a separate organization although there is naturally co-operation between the two companies.

Formerly, the Wm. Rutherford & Sons Company, Limited, had a box factory at St. Henry, but three years ago they amalgamated with the Montreal Wire Bound Box Company, and formed the Dominion Box & Package Company, Limited, and a year later moved to their present location, where a new mill was built and equipped specially for the manufacture of packing cases.

Box companies are, as a rule, run on small margins of profit, and the management which desires to make money has to study ways and means more carefully than in any other form of woodworking, if packages of the best quality are to be produced which will at the same time yield the owners a fair return. In the case of the Dominion Box & Package Company, Limited, this matter of economical production has been carried out minutely, and the company is more than usually well fitted for the manufacture of a first-class article at the least possible cost.

The lumber yards are particularly well situated, it being possible to bring in lumber by canal, or by C. P. R. and G. T. R., place it almost directly into piles, from which it is but a short haul to the mill. Lumber is bought well ahead of the actual requirements, and at the time of the visit of the representative of the Canada Lumberman there was well over a year's supply of all the grades used in the business, a fact which is a very important factor in making quick and reliable deliveries required in this line of trade.

The mill itself occupies about one-third of the block bounded by Notre Dame, Atwater Avenue, and Levis Street, and is built three storeys high, every square foot of its floor space being utilized with a view to making the process as continuous as possible so as to prevent congestion and unnecessary handling, as it is the company's policy to save every cent possible in the cost of manufacture, in order that it may have more money to spend in perfecting the quality of its product.

The lumber, as it comes from the yard, is dumped behind the



Ritz Carlton Hotel, Montreal—Interior Finish supplied by The Wm. Rutherford & Sons Co., Ltd.

surfacers, of which there are two, which deliver the lumber dressed on two sides directly into the mill, where it is piled at once behind the cutting saws, which are of the swing and live table type, placed lengthwise of the mill. The rip or fitting saws are placed at right angles to and beside the swing saws, so that the operators do not have to move from their tracks in performing their work.

This battery of saws is driven by two 10 h.p. motors suspended from the ceiling, which drive half of the sets through a very unusual and ingenious arrangement of belting and shafting. The drive was split in this way in the first place so that in the event of dull times it would be possible to run but one motor and operate but half the saws, but it is significant of the progressive policy of the company that it has never seen a time when it could afford to stop any of its saws, not to mention one-half of them.

The groovers are situated close to the saws, and in the centre of the mill, to avoid handling of the pieces and so as to be readily accessible from any of the saws, while each outside bay of the mill is occupied by a dovetailed jointer made by the Canadian Linderman Company, which are used for the finer class of boxes on account of the strength and neatness of the resulting joint as compared with the ordinary tongue and groove. As a matter of fact these machines are kept busy in preference to the regular groovers, on account of the saving possible in lumber and the superiority of the finished box.

Lumber matched together on these machines is as strong or stronger than solid wood itself, and it is a fact that where glue is used it is very seldom that a break can be made in the joint. It is self-evident that boxes made on these machines would be stronger than those made on the ordinary groovers as all slack and slip between the pieces making up the package is absolutely eliminated, and the resulting package is a rigid and safe container which, by actual test, shows itself to be 50 per cent. to 75 per cent. stronger than any other package on the market. Where it is not possible to make the whole box with this process, either the ends, sides, tops or bottoms are so combined with those made on the ordinary groovers as to produce a package which is amply safe and strong for the weight to be carried, and here again perhaps we have another secret of the fact that the company was running full time in the face of the present general depression in business.

There are two band re-saws for splitting the shook, one a twin which makes two cuts simultaneously with the same labor outlay as would be required for one cut, and a large single 7-in. machine which is used for the heavy work, such as shoe cases, etc. Cuts up to 33 in. in width are made on this machine every day. The twin is not suited for this heavy work but is an extremely fast machine for light stuff not exceeding 18 in. in width, so that the work is divided between them to the best advantage.

All Done by Machinery

The stock is next carried by a hoist to the second floor where the first operation is trimming for length and width, a very small allowance having been left so that the box when it is finished may be neat in appearance, and exactly true to size, after which it is usually stocked in a space extending across the mill, behind the assembling machines, or taken further along to the printing room where the printing is done in a most up-to-date manner by three rotary two-color presses and two small flat presses. The stock is then ready to be assembled, and goes directly to the assembling machines, which extend lengthwise of the mill, consisting of the best and most up-to-date machinery for the making of large and small nailed cases, dovetailed and lock corner boxes. All this work is done by machinery, and very little hand work of any kind is done except in special lots too small to be handled to advantage on the machines, or special boxes which require considerable hand work. The latter class of article is taken care of in the centre bay of the mill, where all the machinery necessary for their most economical assembling is located.

The finished cases, after leaving the assembling department are piled on large trucks by the men performing the last operation, and taken directly into the shipping room, where they are sent down slides to the teams in the street below, or sent to the top floor for storage until needed, by an endless chain carrier, which is reversible to bring them down again when required.

The company keeps several teams on the move throughout the city all the time, and in addition to these, uses a three-ton truck to very good advantage, affording in this way a very good delivery service to its customers, and extending its useful field of operation by several miles.

Across the whole mill in front of the cutting saws runs a conveyor for waste blocks, which dumps them on to an inclined conveyor which takes them to the third floor and dumps them into a bin on the second floor, so that the carts are loaded from this bin by gravity. All the wood waste from this mill which can possibly be utilized for the purpose is sold as kindling wood, and the company has a very good demand during most of the year for this waste. Formerly, it had been handled in trucks and boxes, which always resulted in congestion of the elevator, and a large amount of bother and inconveni-

ence to everyone in the mill, but, since the new system has been installed, there has resulted a large saving in labor, and a great increase in the cleanliness of the mill, and general satisfaction to all concerned.

The company gets the full time of its sawyers who are expensive men. There is never any waste under foot in any part of the mill, as everything undesirable in the lumber is cut out and disposed of once and for all, and the labor of handling the wood is reduced to a minimum.

The mill is driven throughout by electric motors, a number of machines being grouped together so as to secure the greatest economy in power consumption, and at the same time make it possible to run one set of machines for a special operation overtime without interfering with the rest of the mill in any way whatsoever.

Fire protection is provided by Estey Automatic Sprinklers all over the mill, in addition to which there are the usual hose outfits, water barrels and chemical extinguishers. A watchman is on duty every moment when the mill is not actually running, and his movements are checked by two separate detective systems, one of which can be operated as an alarm.

The mill is whitewashed inside from top to bottom, and is lighted all through by 40 watt, tungsten lamps, the resulting illumination being even and bright without being too brilliant, and there is light enough in any part of the mill for the men to carry on their work without the usual form of drop lamp.

Sawdust and Shavings

The sawdust and shavings apparatus is also interesting, and has one or two unique features which are well worth attention:—On account of the fairly good market for sawdust it pays to separate it entirely from the shavings, and this has been done by installing two entirely distinct systems, which are so arranged as to furnish draught where it is most needed without using any more piping than would have been necessary had the shavings and sawdust been mixed together. The planer room, where the majority of the shavings is made, is situated at the exertme end of the mill, and nearly 300 ft. from the boiler house, therefore a double 14 in. fan is installed on the third floor of the mill directly over the planer room, which lifts the shavings through the fan and over the roof to about the middle of the mill, where they are dropped from a separator to a single 18 in. fan also situated on the third floor, which acts as a relay, and drives the shavings over the roof to the boiler house. This 18 in. fan also carries shavings from the groovers and Linderman machines on the first floor, and from a small planer, also on the first floor, besides taking care of the various sweep-ups situated on all three floors, which are used only at certain times of the day.

In order to secure first-class and prompt attention necessary to repairs which are urgently required on the high speed machinery used by the Dominion Box & Package Company, Limited, and by The Wm. Rutherford & Sons Company, Limited, the former operate a very complete repair shop which handles all repairs for both concerns, including the upkeep of seven automobiles owned by the company, and also the filing equipment which is used in the same way as the repair equipment, both being in charge of the superintendent of the box factory.

The machinery was supplied by the following firms: Canadian Linderman Machine Company, Limited, Woodstock, Ont.; Samuel J. Shimer & Sons, Limited, Galt, Ont.; St. Paul Machinery Company, St. Paul, Minn.; W. B. Mershon and Company, Saginaw, Mich.; McGregor, Gourlay & Company, Galt, Ont.; Connell and Dengler Machine Company, Rochester, N.Y., and the Morgan Machine Company, Rochester. The saws are by the Simonds Canada Saw Company, Limited, Montreal; Henry Disston & Sons, Limited, Toronto, and E. C. Atkins and Company, Hamilton, Ont.

Responsibility for the various duties of the business are very clearly divided, and business must be done through the usual routine:—thus, the manager buys the lumber and looks after the financial matters, the office and sales, and has under him a head office man and superintendent, and to these two men only does he give instructions of any kind under any circumstances. This plan is carried out straight through the mill so that there is a direct chain of responsibility, and each important man in the chain has an assistant working with him in some capacity who can step in and take his place for a certain length of time without any appreciable interruption to the operation of the business. All this tends towards a more reliable and certain source of supply for the various users of boxes, because the plan from start to finish is organized for the useful application of effort, which cannot but result in a maximum of service and satisfaction to customers, and therefore to the owners.

Mr. S. F. Rutherford is the managing director of this company, and C. B. Fuller, Jr., is the superintendent. The mill was planned and built by them, and they are still working and planning to make it and its product better and to improve its operation, believing that the box business will be subject to improvements for some time to come, and meaning to stay in the lead.

Retail Methods Contest—Who Will Win the Prizes?

For the Best Letter on Yard or Office Troubles

Competition for Retailers

The last day for receiving letters in the Retail Methods Contest will be February 1st. Every letter reaching us by that date will run a chance of winning. Let us hear from you.

Retail Lumbermen have plenty of yard and office troubles. Everyone has his own way of handling difficulties. Send us a letter about one of your own problems and the way you handle it. We are offering prizes for the best letters.

Fifteen dollars for the best.

Ten dollars for the next best.

Five dollars for the third best.

If you do not come among the first three, you may be among the next five, to each of whom we will give a year's subscription to the Canada Lumberman. If already a subscriber, you will be given credit for another year.

It won't be any trouble to write and you may get one of the prizes.

Others will benefit from your idea; you will get the benefit from all the ideas of all the others.

Any yard or office problem will do. Make your own choice and write soon. The contest will close on February 1st and the prize winners will be announced as soon as possible after that date.

If drawings are necessary to illustrate your idea, they may be included, or a rough sketch may be sent, from which we will prepare an illustration. Make the sketch plain and our artist will carry out your ideas.

Three experienced retail yard men will be the judges.

The contributions will be numbered in the order received and the names withheld until the judges have given their decision.

Retail Service—Its Effect Upon Cost of Living

It is an interesting question as to how far the accommodation given to our customers goes to help us in securing more trade, and also, when this ceases to become such, and is regarded as a right we owe them for their patronage. I think all business men will agree that there are few things in business that have had such a rapid development as some things of this nature which the public has come to not only ask for, but demand as a right from the business man. We are giving a variety and a class of service now to the public that the most of us never dreamed of twenty-five years ago. Still, as any new service becomes common, appreciation of it ceases, and the demand for something else is created and the national query rises, what next, and how far is trade service going to go?

A leading grocer of this place said to me the other day that the women were agitating for the passage of a city ordinance compelling the grocers and others handling food products in the stores, to handle them with other appliances than the bare hands, and deliver them in the same way. This looks like an absurdity, but other things in the line of service that have now become common, were considered absurd and unreasonable at the time of their first appearance. And so it is. The burdens of doing business are increasing year by year without any corresponding benefit in the way of profit to the business men. Every dollar he makes now he earns every cent of, and in many cases, he earns it over again in his efforts to collect from those he has accommodated with credit.

There is a class of service that is beneficial to both business man and the consumer. It consists in studying the needs of the community in his particular line and supplying them with the best that can be afforded at the prices asked. In the case of the lumbermen, he is rendering a real service in educating his community as to which is best in building construction and the most economical. If he handles coal, he is performing a real service in trying to supply his customers with the best coal to be had for the price. It is the same in the case of the brick, tiling, roofing, fence and all other such articles which he may carry in stock. He is rendering good service in selecting the best he can secure in the market. The public naturally expects this of him, and it is incumbent on him as a duty to fulfill it. This kind of service, however, it not to be classed as a favor or an accommodation.

These are in a class of services by themselves, but they have become so common and expected from the business men, that neither they, nor the public seem to differentiate between what is fundamental service, and that which is added to it in the extension of favors that have grown into a custom. And the consequence of it all is that this extension of favors has grown to be "too much of a good thing" for the profitable carrying on of a business by the smaller business men. This is more particularly felt in the larger cities than perhaps in the smaller cities and towns where conditions are different.

A good deal of this giving of favors to the trade has resulted from the growth of emulative competition in business. The older and more primitive way to get trade, was by cutting the price, but the higher class of business men nowadays strive with each other as to who can give the best service in both quality and extent of accommodations and favor. This is emulative competition and includes everything in the way of producing something new to create desire and stimulate action to purchase.

When you and I delivered free of extra charge our first load of coal and our first lot of lumber, and if it was thirty-seven years ago, as it was in my case, we did it purely as an accommodation. For my part, I didn't expect, nor intend to keep it up as a regular practice, but after doing it once, I found it easier to do the same again. There was no telephone then, and it was difficult for people to get the drayman when they wanted him. A good deal of the time he was working for me by the day, and so I got to making small deliveries without charging for it. It was not long, however, before the word went around in the little community that I was delivering free of charge. My competitor of course heard of it, and he jumped to the conclusion that I was doing it as a bait for trade, and he too began doing the same thing without coming to me and learning the circumstances of how I came to do it. Within a year free delivery was fastened on us both.

When I settled in the next town, I found the dealers were giving free delivery of building material to carpenters only and to owners who bought a bill with a stipulation in the contract that it should be delivered on the ground within the town limits. Coal was delivered free from the car only. But, as all three of us dealers had teams of our own, it was not long before each of us was surreptitiously offering to deliver stuff as a bait for the business. Within two years, free delivery was an established custom with the lumber and

coal dealers. Other lines of business held off from it for a year or two longer and it was some time before it became as universal with them as it is now in every place of its size among business men generally. And the public have come to look upon it as a right the business man owes them for their patronage. The idea of its being a favor only never enters people's minds nowadays, and so common has it become, that merchants consider it as a part of their business, include it as a part of their expense account and charge it to the costs of doing business, thus making the public pay for it after all.

Would Not Go Back

I don't suppose there is hardly a dealer now who has got in the habit of free delivery who would, if he could, go back again to the old system of having every customer doing his own delivery. We never go backwards in anything of this kind after ourselves and the public have become adjusted to it. But while we would not change for the old way, yet there is a growing sentiment in the retail business world, that free delivery is being abused by the recipients of it. It may be thought that the fault is not all with the public. With the compelling force of the high cost of doing business behind them merchants are driven to the necessity of doing most anything to hold their trade. One of our druggists told me recently that his deliveries averaged over a hundred a day, and were put on the books at that. He told me further, that his bookkeeper makes out at the end of the month an average of 2,000 statements of account, ranging in amount from 5 cents to \$100. Some of his "long winded" customers leave a year's bill unpaid and go away to foreign countries for a pleasure jaunt. But such as this is a common thing here in the city. I've only given you a mild illustration of the "white man's burden" who is in the retail business in a large place.

This question of abuse of delivery came up at a meeting of our Commercial Club and from the accounts of individual experience that I heard, it would seem that the women folks were mostly to blame for it, because of their failure to consider the interests of the people who are serving them. It is a common thing for housekeepers to 'phone the store seven or eight times a day for as many different items, when by the exercise of a little planning and forethought, they could include them all in one, or at most, two, deliveries. Then again, servants are often allowed to do the buying for the house, and they, like their mistresses, don't care how much trouble they put their grocer to in delivering the order.

I might mention in this connection another phase of this purchasing of supplies by employees. I don't want it to be understood that it is general here in the city, but there are too many cases where the business man has to pay more or less of a commission—graft is the real name for it—to the employee who is entrusted with this business for his employer. I know I lost several customers because I refused to "come across" with the percentage of "graft" required. Of course, you have nothing like this in the country towns, but you are "held up" in other ways that are not quite so direct.

Lumbermen have been and in the larger city close by, are exempt from much of the excessive abuse of free delivery, but it is chiefly owing to the nature of their business that they are. They are not wholly free from it, however. I didn't know the real meaning of free delivery for a lumber yard till I engaged in business here. I have been asked to deliver one post and a 2 x 4-16 at a place that was two miles from the yard, and have done it too. That is only a sample. I could tell you of other instances that would make you think yourself lucky to be where you are as far as delivery is concerned. You hear tell of the high cost of living. The agitation of it came first from the cities where the general items of such things as clothing are about the same prices as in the average country town. Food stuffs are necessarily higher of course, but it is the enormously high rents and the cost of the excessive service required for distribution that has made it increasingly difficult for the small merchant to make anything over and above a living, and so it has come about that the larger part of the retail business in a city like Chicago is being done through the department stores. 'Tis true there are a multitude of small shops scattered throughout the city on the street car lines, but their business is mainly catering to the immediate necessities of the neighborhood.

It Will Come in the Smaller Towns

I have in the foregoing briefly described the class of service that has rapidly developed within the past few years to make it more difficult for the smaller business man to do business and compete with the larger aggregations of capital, and there is no question in my mind regarding the merchandising business in the smaller country towns. There will be a concentration of the bulk of the business into the hands of men who are real merchants who will operate in department stores, thus reducing materially the cost of operating expenses, and at the same time, giving the public a greater variety of stock to choose from and at even lower prices than they can buy from the outside mail order houses. The smaller fry of so-called business men will be to

some extent eliminated, and the rest will run a few little shops for an uncertain living.

The bane of the country business man has been the loose business methods which long custom has practically compelled him to follow. The times and conditions have so changed, however, that he is perforce obliged to break away from custom and adjust himself to accomplished facts in the changed conditions that have affected everything in the way of living. What is now become customary service he accepts. The expense of it he includes in his cost of doing business and, in the last analysis, the public pays for it, and therefore it makes another item in the cost of living which the public is protesting against and at the same time, putting the blame of it all on the retailer and other middlemen.

Higher Cost of Labor Contributes

There is one thing, however, you rarely hear about in this connection and yet it is one of the principal causes of the advance in prices on many commodities, and particularly on the cost of building. That is, the extraordinary increase in the prices for labor. In nearly all the industries the eight-hour day has been established. This means that it takes 20 per cent. more labor to turn out the production for a day, and is practically that much advance in the cost. Then again, the wage scale has almost doubled from what it was twenty years ago, and when you add this to the shortening of the hours of a day's work, the two together would naturally seem a logical reason for the general complaint that the cost of living has nearly doubled during this period of time. Of course, there are other things entering into the causes for this increase in the price of labor, but it is too large a subject to be discussed here. I merely mentioned this labor business because it is usually ignored by people when complaining to the retailer that he is charging too much for his goods, and they rarely see anything said about the labor proposition in the newspapers they read.

Considering now more particularly the case of the retail lumberman in reference to service, as I have said, the service he now renders to the public he has come to consider as a part of his business, and his study now is to increase its efficiency without materially adding to its cost.

Another Contribution to Cost

But there is an element in his business that is of the nature of service that he does not get the meed of credit for, that its importance warrants by its value. It is an expense to him, but it is of such a nature that he cannot pass it on to the consumer. I refer to the accommodation of credits that he gives to his customers. Every time you make a sale to a customer, and give him an extended time to pay for it, you are giving him the service of just that much of your capital. What profit you make on the sale is the pay you get for your service in assembling the stock and keeping up the yard to sell it in. Now, if you take the 2 per cent. discount on your bills and sell the stock on 60 days, or longer time, you are giving the customer what you have received in the way of discount. If he has money drawing interest on deposit at the bank, you are saving him the interest on what he would have had to withdraw to pay you cash for the sale. If he has no money, but wishes to hold his produce for a higher market you are loaning him that much of your capital for the purpose, instead of the bank. You thus give him the service, and pay for it as well. Yet, this class of service is not thought of nor considered as a service by the customer nor the public either. I doubt if the average retailer has a realizing sense of it being in the nature of a service, and this is the reason for my drawing attention to one of the commonest facts in the business.

There is another factor in the retail lumber trade also, that receives a large amount of service in the way of accommodations which neither they or the public realize the extent and value of it as service. The building contractors sometimes get it into their heads that they are more necessary to the lumberman than he is to them (a question that I won't discuss in this connection because it is not relevant to what I wish to show). But, granting that they are a necessary factor in the business of a retailer, is it not a fact that in the large majority of cases the dealer pays for their services, out of all proportion to the value in profits he receives from the bills he sells them. The bills would have been sold by the dealer anyway outside of the contractor as an intermediary. The owner can hire his men by the day to do the job and employ the would-be contractor to oversee it. So when you come down to "brass tacks" the contractor is not an absolute necessity for the average building in country places. He may be rated as a convenience though, instead.

Must Be Handled Carefully

However this may be, the contractor in the country town is a factor in the business that has got to be reckoned with, and carefully handled as well. I presume there is no one thing in the retail end of the lumber business that causes more thought and worry to the dealer than the country carpenter who thinks he is qualified to take contracts and make more money out of them than by working at his trade for

daily wages, and this applies as well to the other trades that use the materials, which are now, and generally have been, a part of the stock of a country lumber yard. Except in rare instances, none of them have any capital in the way of money to put into their business and the main cause of their trouble to the dealer is not because they are not honest in their intentions but because of their lack of ability to figure and secure jobs at figures that will cover contingencies and give them a profit over and above their daily wages as workmen. It is because of this lack that the necessity for something to do drives them into competing for jobs at any figures they can secure, and the dealer is supposed to bear all the brunt of this because of their lack of ability and their necessity. The worst of it all is they consider it an obligation on his part to do this in return for their patronage and "legging," as it is called, for his yard.

There is no other line of business in the town that has to do with such an element as this. I don't know as there is in any branch of merchandizing anything of this character, and therefore other business men have not the experience to enable them to appreciate what it means to the lumbermen. As with other things, however, the dealer accepts and deals with it as being all in the day's work and uses his tact and diplomacy as best he knows how in coping with the conditions as they develop in the year's business. The service he gives the contractors is unknown, but it is customary, and he knows, if he doesn't give it, there are other dealers who will. So both he and his competitors are used by the contractor to club each other in their efforts to get his trade.

But with all this customary liberal service and furnishing of capital to do business with by the dealer to the contractor, it can be said of the latter that he is never wholly satisfied. There probably are some exceptions to this general rule, but I have rarely found them in my experience in a country yard. No matter whether he is a day-working carpenter, mason, bricklayer or plasterer, when he changes to a jobbing contractor and wants to furnish the materials, he wants the dealer to let him have them at prices lower than he will sell to anyone else. He seems to lose sight of, and forgets, all the other accommodations he receives, and demands this as his right. I have never yet come across a carpenter who did not think so, and if this privilege is given him it won't be long before he ceases to regard it as a privilege, but as something that is owing him for his influence, which in most cases is largely imaginary.

You understand, of course, that I am speaking of this point in a general way. As we all know, there are some cases where a dealer has an exceptionally prompt paying contractor and besides is a regular customer. In this case it pays the dealer to be more liberal with him in this respect, than with the ordinary little petty jobber, whom he has to nurse along and watch out to get his money from. One has to be chary about giving service of this kind. He has to give enough as it is of other character. It is surprising, when you think of it, how much we have to give besides our time and capital to secure trade and hold it.—C. H. Ketrige in the Mississippi Valley Lumberman.

System in Checking at Planing Mills

As the primary and in fact the only reason for checking work of all kinds is that we may discover any errors contained therein, it stands to reason that the methods employed in checking should be proper and thorough.

We who are engaged in the strenuous work of getting out millwork at a profit in competition with others who work as hard and figure as closely, know that it is a constant temptation to pass work along without the proper amount of checking. The legitimate result of this condition of things is that about all the checking a man is able to get on his work is that which he is able to give it himself.

We also know that while a man can check his own work more quickly than anyone else can, he is really more liable to duplicate his errors, and on this account should systematize his methods of checking so as to cover all the possibilities for error that he is liable to locate.

To begin with, let us consider the checking up of an estimate. If the estimate is made from a list it is a mere matter of checking back against the original to get the correct items, and the unit prices and extensions will be subject to the same care in checking as in the list made up from the plans.

When taking off quantities from the plans we have found it expedient to use some small pencil check on the blue-prints, usually a yellow pencil making a small check which is easily erased, and check every item of millwork on both floor plans and elevations. One might think that this would insure the taking of all that work on any and all buildings, but such is not the case by two distinct classes of items.

Checking Plans and Specifications

In cases where the details accompany the floor plans and elevations we often find items which do not show in the main set of plans at all. We often find items shown on sections which are not included

in either floor plans or elevations, so we have come to the conclusion that it is the better part of discretion to put our check on all of the details as well as on the plans.

The next part to be checked is that of the specifications, for we often find many things included in the specification which are in no way indicated on the plans and details.

So far we have checked only for quantity with each characteristic description, but in order to get at an intelligent pricing we must get at the component parts of the details and check them to be sure that we do not figure a 14-inch paneled jamb the same as 2 by 6 rabbeted one. We must check our plate glass openings separate from our D. S. glass and the art glass still differently.

Another important item of checking is that of negative checks. By negative checking I mean the checking of items usually considered millwork but which are excluded from the bid on account of being specified as metal, such as windows, fireproof doors and frames, switch cabinets and the like.

Excluding by Negative Checks

In certain cases the contract is divided into two or more parts, such as "construction," "interior finishing," and perhaps the latter has several subdivisions, so that the only intelligent check we can get on the plan is to check all the items, and as fast as we learn through notes or specifications that an item is excluded, to give it a characteristic mark, usually a red check, so that when we give the plans our final visual inspection for items missed, we will not be annoyed by having to stop and look up items only to find that they are excluded.

When we have all of our available data checked and are satisfied that we are not short on quantities, and that we have all the notations on the estimate necessary to enable us to understand the relation between items and prices after the plans are gone, we are ready to put the prices opposite the items.

As this article intends to deal with checking and not particularly with estimating, it matters little what system of analysis is carried out in listing the items from the plans. However, if openings are used as the unit basis for items and analyzed into doors, frames, transoms, trim and perhaps a column or two for special items such as glass or cabinet trim work, it is necessary to check through the additions that make up the unit prices. In some offices this is done by some clerk or assistant on the adding machine, and at the same time multiplying by the number of units into the proper extensions.

One of the dangers of unit pricing in this way is that of improper extensions such as figuring a twin or other multiple opening as a single one. Perhaps we might put down the price of a single window instead of a twin and there might be a large number of such units. One good way to prevent this is to begin close to the front side of the quantity column and put the word twin or whatever the multiple may be in the column with the figures, or if there is not room for it all it may be started in the figure column so as to insure its being seen when looking back for the extension number.

While upon the subject of extensions I would say that the tentative check is of the utmost importance in the discovery of error, and by this I mean looking back from the result put down in the extension column to the unit price and then to the number of units. One can tell within an insignificant amount whether the result is what it should be or not, by sensing the principal figures of the numbers involved. If it looks out of line he will proceed to verify it. If it shows up with the right beginning and the correct number of figures he knows that it must be right within a negligible limit.

Another good check in estimating is that of putting down on the estimate sheets various obscure items encountered when the estimator is looking for something else. It is not well to break up the routine of an estimate for this purpose, but it is often the means of catching items which might otherwise be missed. These should be handled as notes on a separate sheet and then at the proper time incorporated into the body of the estimate.

Listing the Items Accurately

After a contract is secured, the next move of the mill is to get out a listing of the items to be made in accordance with the desires of the customer, generally indicated by that part of the work he needs first in his work of construction. In the case of blanket bids, it is necessary to check this list against both the plans and the estimate, and the items on the estimate should be checked as fast as listed, so that as the work progresses one may tell by looking at the estimate sheets just what part of the work has been gotten under way.

If the prices of the items listed are put on the office copy of the listing or order sheets, and checked against the estimate, it will be easy to keep track of the amount of stuff sent out from time to time and bill it out with the proper charge.

The billing of the work into the mill is more liable to error than any other part of the clerical work in connection, on account of the multiplicity of items, and for this reason it is very desirable to have some efficient method of self-checking.

Some foremen who do their own billing insist on laying out full

sized sections of complicated work before billing it out, while other men handle the work simply by figuring it through, for all kinds of work may be figured, and generally more quickly than a layout can be made. But if a man knows that a layout is the only efficient check on his billing then he should check in that way, and his workmen can use the same rods or patterns later when doing the work, thus dividing the expense of billing with that of work in the mill.

The grouping of quantities for convenience in handling in the mill is bound to complicate the work of billing and also the work of checking, but if we check our horizontal members against our widths, and our vertical members against our heights, and our whole numbers against the totals on our listing sheets, we are not apt to bill the wrong number of pieces. Then if we check our list of prices against the details of the work in hand we are not apt to miss any class of pieces which occur in the billing.

After the bills go into the mill, the checking of the various workmen through whose hands they pass must be done with painstaking care, and this does not necessarily mean that they must spend a lot of time in this part of the work.

There is always the temptation on the part of some machine men such as sticker and jointer men to work the pieces brought them, and then if they are required to check each item to take the bills and check off every item as it comes without counting them or measuring any of them to see if they are of the size billed. They say they haven't time to measure up every piece, but we all know that it is not necessary to measure every piece unless every piece is different, but to count them either before or after running is not such a great task as it is to make a subsequent setting to run the shorts.

So every separate workman who has to pass on the material should have a distinctive check, and if an error in cutting or machining succeeds in passing them all it goes to show that they must be very careless in keeping tab on their work, and that they are paying more attention to the bills than they are to the material.

As the amount of time taken to check material in transit through the mill depends so largely upon its order and arrangement by the cutter, it stands him in hand to so arrange the material on the trucks that it may be rehandled and repiled in some sequence which will allow every man who does this to machine and check the material afterwards with a minimum of time.

The danger of advance checking is encountered when any man attempts to check his material before it goes through the operation for which he is responsible, on account of the liability of error of previous workmen, his own liability to spoil some of the stock and the possibility of some of it turning out bad for reasons beyond his control.

I remember one case of a foreman putting up cabinet trim and when he took a set of jambs and casings to a bench man to put up he would check off the item on the plans and enter it on a list of his own. When he had his list complete and ready for shipment he had several sets of trim for which he had no place. When the shipping clerk came to check the shipment he was short as many sides of trim as the foreman was long.

The only explanation of the matter to be figured out was that after the foreman had delivered the material to the bench man and had checked it off, the said bench man had been taken off and put on other work before completing the trim job, and in this manner some of the material had been counted and checked twice. It will readily be seen that if he had waited to make his check until the stuff was actually started on its way to the wareroom he would not have fallen into this error.

Another case involving a good shipping clerk was that of marking and checking a large number of packages as being actually loaded into a certain car before they were loaded onto the trucks for that car. He could easily mark and check the material and say to his men, "This all goes in the car." Of another pile of bundles he says, "This goes local and must be loaded on the wagon," and he may check it the same as the carload stuff. But the fault in this practice develops when the company learns later that certain bundles enumerated on the shipping list were not to be found in the car upon its arrival at destination a thousand miles away. Of course the roustabout help had loaded some of the carlot stuff out with the local shipment and it was found after several weeks' delay.

When the items enumerated on the order or listing sheets are shipped, it becomes the duty of someone to check the office copy with the shipping date, or if but partial shipment is made, then to check that part as shipped.

It will depend upon the routine work of the office how the charges are made, but it will be necessary to put an accountant check upon the order sheets as they are entered in ledger or journal so that one may tell by looking at an order sheet whether it has been billed, shipped and charged.

Because I am putting so much stress on the subject of efficient checking, let it not appear as a mere bunch of red tape to be tangled and then thrown away, but make it a matter of efficient training for

every part of the working force, and the results are bound to be a cutting in cost of both overhead and productive labor.—Chas. Cloukey in Wood Craft.

Side Lines for the Retailer

Stouffville, Ont., Jan. 5th.

Editor Canada Lumberman:

Up to the present time the writer has been very busy with the fall trade which we are thankful to say has been fine. The last season's trade in this district has been the best around here for years. We did a nice steady business, and of course we do not have to depend on the loan companies for our money, but on the farming community. We have no spurts and stops in our trade but it is steady and solid. Last year's business was fully 25 per cent. larger than that of the year before.

Regarding the side line question, we have no fault to find with our trade carrying side lines at all. In fact we are doing some of our best business with an outside business. There are certain lines which are coming into use, that the lumber dealer has to get, or he will lose that trade which is naturally his. One of these is the galvanized shingle. While we do not claim that they are better than the wood, we must sell what the customers want, but at their own risk. We go to a man and if he won't put on wood we naturally must get some returns from that which was ours at the start, so we sell him what he wants. The same thing applies to the different ready roofings which are on the market. Some want one thing and some another. We do not all think alike. If your neighbor does not come to your way of thinking, go to his, and sell him what he wants. One thing we must say is that the more metal we sell the more wood we sell. Another item which we are selling is the wall board. We must look for something to take the place of that which we are being deprived of.

The outlook for the coming season is even better than last year at this time, so we are looking forward to a good business year for 1914. We might also add that our dealings with the wholesale firms have been of the pleasantest nature, which helps out.

Yours truly,

D. M. Heize & Co.

Personal Mention

P. D. Roe, of Port Moody, B.C., one of the best known of Coast lumbermen, will leave shortly with his family, on a trip to his old home in Scotland.

Mr. W. G. Barron, New York sales representative of W. C. Edwards & Company, Ottawa, Ont., headquarters 1 Madison Ave., spent the Christmas and New Year holidays at his home in Canada.

The Hoo-Hoo of Port Arthur and Fort William, Ont., are arranging for a concatenation on January 23rd, to be held in the Masonic Temple, Fort William. H. W. Robinson, Vicegerent Snark for New Ontario, will be in charge and reports a fine prospect for a great concatenation.

The marriage of Miss Agness Watson, daughter of Mrs. Wallace Watson, Montreal, with Mr. Cameron Macpherson Edwards, of the firm of Watson and Todd, Ottawa, was recently celebrated in St. Paul's Church, Montreal. Following the ceremony a reception was held at the Ritz Carlton Hotel, after which Mr. and Mrs. Edwards left for the south for the honeymoon.

Among the recent marriages of interest to lumbermen in Western Canada are: O. A. Murphy, manager of the McLelan Lumber Company, Ladner, B.C., to Miss Kate Plewes; R. B. McKamey, manager of the Imperial Timber & Trading Company, Vancouver, to Miss Helen A. McRae; and A. K. Leitch, manager of the East Kootenay Lumber Company, to Miss Josephine Haville, of Cranbrook.

J. B. Beveridge, manager of the Dryden Timber and Power Company, was in Toronto recently on business. The plant of the company is closed down for a few weeks while one of the evaporators is being rebuilt so as to increase the capacity of the industry. It is expected that the financial affairs of the company will soon be straightened out satisfactorily, and the directors are looking ahead to a good year when operations are resumed at the end of January.

Mr. S. Austin Hurlbut, northern representative for F. W. Whitman, Philadelphia, hardwood and white pine wholesaler, who spends most of his time in Canada and the northern States, reports, after a recent business trip that he believes improvement will come in the spring. He also looks for a condition more nearly normal rather than a short-lived rush with high prices and subsequent reaction. In this connection it is of interest to note that the trade generally are looking for a quiet but steady return to normal conditions rather than a decided rush after the present quiet. Mr. Hurlbut reports white pine and spruce prices steady in spite of the decreased volume, and looks for higher values with spring business.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

WANTED—Hemlock or Spruce Logs or Lumber. Apply to Box 905, Canada Lumberman, Toronto. 22-23-24-1-2

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-tf

Cash For Hemlock

1-in. x 2-in., entire cut, delivery March to May. Furnish full particulars to Box 934 Canada Lumberman, Toronto. 2

Wanted

Best quotations on car Cedar Posts, 3½-in. to 4½-in. tops, peeled, sound and dry.

A. G. HULL & SON, St. Catharines, Ont. 2

Wanted

1-in. and 2-in. Spruce and Hemlock for spring or summer delivery; will make an advance on stock.

A. N. DUDLEY, 109 Stair Building, Toronto, Ont. 1-2

Wanted to Buy

500,000 ft. log run, sawn Hard Maple, various thicknesses, M. C. out. Must grade proper centage 1S and 2S and No. 1 Common and not to exceed 20 per cent. No. 2. Will pay cash when loaded on cars; or will buy good Maple logs in the round, 12-in. and up diameter.

Write P. O. Box No. 1595, Montreal, giving best price and rate of freight to Montreal. 2-t.f.

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

1 x 1 x 42.
1 x 1 x 48.
1 x 1½ x 42.
1 x 1½ x 48.
1 x 1¾ x 42.
1 x 1¾ x 48.

Require Thickness, 1/16-in. Plump. Quality—Free from all defects.

Can take delivery of green or dry stock.

Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc. 24-1-TF

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

For Sale-Lumber

For Sale

One thousand cords dry softwood slabs and edgings. Canada Pine Lumber Company, Limited, Hamilton, Ont. 24-1-2-3

For Sale

About 35 M. ft. 3 x 4 to 10 8/13 Mill Run Dry White Pine.
Apply P. O. Box 58, Smith's Falls, Ont. 2

For Sale

50 M. ft. 5/8 Dry Spruce, Clear and No. 1. 100 M. ft. 5/8 Dry Spruce, Merchantable.
Apply Box 942, Canada Lumberman, Toronto. 2

For Sale

Spruce and Jack Pine, sawn to order up to 12 x 12. Write for prices.
H. C. DUNBAR, Haileybury, Ont. 2-3

For Sale

About 200 M. ft. of Hardwood logs from 9-in. to 13-in. in diameter. F.O.B. cars, Sherbrooke.

Apply E. L. DARCHE, Ascot Corner, P.Q. 1-4

For Sale

8/4 Soft Elm.
4/4 Soft Maple.
4/4 Soft Elm.

In car lots only. The above is well manufactured and bone dry. Apply Box 925, Canada Lumberman, Toronto, Ont. 1-2

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW, Montreal, Que. c

For Sale

260 M. ft. 5/4 No. 1 C. & B. Basswood.
40 M. ft. 6/4 No. 1 C. & B. Basswood.
2,500 ft. 8/4 No. 1 C. & B. Basswood.
2,300 ft. 16/4 No. 1 C. & B. Basswood.
10 M. ft. 4/4 No. 1 C. & B. Basswood.
J. AUSTIN & SONS, Kinmount, Ont. 23-24-1-2

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE, Timber Department, Janesville, Wisconsin. 1-t.f.

Wanted-Machinery

WANTED—One pair twin circulars, for slabbing logs down to 4 inches and up. Must be in good condition. Apply 524 Board of Trade Bldg., Montreal. 23-t.f.

WANTED—One pair steam engines, capable of developing 500 h.p. for sawmill. Must be in good condition. Apply 524 Board of Trade Building, Montreal. 24-t.f.

Wanted

Second-hand steam feed Cylinder. Must be at least 36 ft. long and 7-in. or 8-in. bore.
Apply Box 932, Canada Lumberman, Toronto. 2-3

For Sale-Machinery

Wickes Gang

A first-class machine at a bargain.
23-24-1-2 W. L. MILES, Saginaw, Mich.

A Bargain

44-inch Wick Gang for sale at a bargain. In first class shape. Apply,
Fraser Lumber Company, Ltd., Plaster Rock, N.B. 2-7

STEAM ENGINE

One only High Speed Leonard, 75 h.p. Steam Engine, in good condition. Special bargain.
J. P. Abel, Fortin & Company, Maisonneuve, Montreal. 2

For Sale

1—Giddings & Lewis Horizontal Slab Re-saw.
1—Pair twin slabbers for ties.
1—Payette Box Board Edger.
1—Engine, 12 x 20, complete.
28—Wrought iron dry kiln trucks.
All in working order.

FIRSTBROOK BROS.,

Penetang, Ont. 24-1-2-3.

Woodworking Machinery For Sale

1 2¼-in. Waymoth variety lathe; 1 No. 1 Ballantine power feed dowel machine; 2 8½-ft. iron frame swing saws; 1 8-in. Bentel & Margendant universal woodworker; 2 24-in. Ideal planers, matchers and moulders; 1 36-in. Egan double drum sander; 1 12-in. MacGregor-Gourlay four side moulder; 1 54-in. Jackson-Cochrane Resaw; 1 Hespeler upright power mortiser. H. W. Petrie, Limited, Toronto, Montreal and Vancouver. c

For Sale at a Bargain

1 10 in. x 10 in. Simplex Pump.
5 Steam Engines.
1 Killam Stock Gang (New).
1 Mitts & Merrill Hog, No. 20, 10 in. x 12 in.
1 Ricker with 30-in. Saw.
1 St. John Iron Works Driving Gear for Band Saw Carriage.
Edger, Planers, Shingle Machine, Chain Blocks, Trolleys, Saw Arbors, Pulleys, Rotary Saws, and a large lot of Steam and Mill Fittings.

Address, T. N. McGRATH,

Tusket, N.S. 20-t.f.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted by thoroughly experienced Bandsaw Filer. Address H. J. c/o Canada Lumberman, Toronto. 2-3-4

Experienced lumber salesman will be open for engagement February 1st. Address Box 933, Canada Lumberman, Toronto. 2

Position wanted as single or double band sawyer. Good references. Apply Box 928, Canada Lumberman, Toronto. 1-2

Position wanted as single or double cut band sawyer for coming season. Good references. Box 940, Canada Lumberman, Toronto. 2-4

Advertiser, desirous of change, wants position with retail lumber firm as ledger keeper or general office work. Several years' experience in city. Box 941 Canada Lumberman, Toronto. 2

A first class foreman carpenter desires to change his position. Specialist in transportable wooden buildings, such as hospitals, schools, cottages, bungalows, villas and farm houses. Have worked in the largest factory in Germany. Familiar with export trade to South America and Italy. Aged 39 years and energetic. Address Box #30, Canada Lumberman, Toronto. 2

A progressive, practical, live man; a hustler; forty years of age, wants a position with a wholesale house located in Eastern Canada or some of the Northern or Middle States. Has had experience in following the lumber industry from stump to market, and has made the manufacturing and grading of hardwood a special study. Well versed in the "National" rules as well as in the requirements of the English markets. Is well qualified to purchase stock on contract, or otherwise, for both the American and foreign trade, or will act as salesman in any of the English-speaking markets, or as culler, if a satisfactory salary is offered. Uses no intoxicants whatever. For further particulars apply to Box 939 Canada Lumberman, Toronto. 2

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

Salesman Wanted—Large Southern yellow pine manufacturers want a good Canadian salesman to travel Canada. Must know yellow pine trade. Good salary. Apply in first instance to E. J. Macintyre, 659 Peoples Gas Building, Chicago. 1-2-3

Men for sawmill wanted: Engineer, fireman, sawyer, jacker, setters, tail sawyer, lath contractor, pilers and others for Band Saw Mill at Kearney, Ont., for summer season. Cut is pine. State age, habits and firms previously employed with. Apply W. J. Armstrong, Biscotasing, Ont. 2-3-4

WANTED—An experienced accountant in the lumber business to take the Secretary and Treasurership of a new organization in a Western Canada progressive city. Must be prepared to subscribe two or three thousand dollars' worth of stock. When replying state salary expected and enclose references. Apply Box 931, Canada Lumberman, Toronto. 2

Men For Sawmill

Wanted: Engineers, firemen, sawyer, jacker, setters, tail sawyer, lath contractor, pilers, and others for Band Saw Mill at Kearney, Ont., for summer season. Cut is pine. State age, habits and firms previously employed with. Apply W. J. Armstrong, Biscotasing, Ont. 2

Business Chances

For Sale—Planing Mill,

A going concern. Consisting of lands, buildings and machinery in good live town, Waterloo County. A. C. Bender, Real Estate, Berlin, Ont. 23-24-1-2

Bargain if taken before January 15th. Tug Marie Louise, length 65 feet, beam 15 ft., 50 h.p., steam 200 pounds. Hull rebuilt 1911-12, fully equipped, electric lighted, cookery outfit, sleeping accommodation for 7 men. Also two scows.

The Baker Lumber Company, Ltd., 23-24-1-2 Lindsay, Ont.

Saw Mill For Sale or Lease

What is known as the scenic Island Mill at Little Current. Cutting capacity 140 M. inch lumber in 10 hours. In first class condition.

Possession can be given 1st January next. For further particulars apply to

THOMAS CONLON,

44 Church Street, St. Catharines, Ont. 21-t.f.

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

Wanted to Buy

One or two lumber yards each doing a yearly business around \$30,000. Would like to trade some farms in on the deal. Apply to K. T., c/o Canada Lumberman, Toronto. 24-1-2-3

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont.

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

For Sale

Lumber Limits in Eastern Canada, 50,000 acres, large Sawmill, fully equipped going concern, on salt water. Correspondence solicited. Will be sold right to close estate. Address, Timber Limits, care Canada Lumberman, Toronto. 22-t.f.

For Sale

Fully equipped sawmill, capacity 35,000 ft. per day. Most advantageously situated in one of the large lake port towns. Splendid harbor, railway sidings, and everything complete for doing business. Large local trade. Bargain price for immediate sale. Satisfactory terms can be arranged. Apply Box 938, Canada Lumberman, Toronto. 2

Saw Mill Property For Sale or Rent

The following are some of its leading features: Situated near Little Current, on the Georgian Bay, on what is known as Picnic Island. Contains 37 acres of freehold property which includes the mill and more than twenty other buildings. It has been leased by the Wolverine Lumber Company during the past seven years, and their lease expires the first of January next. If they buy more limits they may likely continue the lease. In the meantime we are offering the property for sale or rent. The mill has been cutting about 20,000,000 a year on small logs and a ten-hour day. The Island is in unorganized territory and our yearly tax on it is only one cent an acre in addition to the Little Current school tax of about twenty-five dollars a year. The power consists of two engines—a 24 x 30-inch and a 20 x 20-inch cylinder. Five boilers 60-inch diameter by 16 feet long. A double cutting band, a wickes gang (36-inch) and a circular saw. Two trimmers, two edgers and good lath mill capacity. The protection against fire is probably the best on the Georgian Bay; with a fine large pump in the machine shop, and a water tank outside ninety feet high with water pipes leading to the mill and all the houses on the Island, four streams at once can be thrown on the mill. We carry \$82,000 insurance on the mill and on all the buildings, the average rate being less than four per cent. Our piling capacity consists of 2,200 feet of stone-filled docks holding about ten million feet, and ten million more in the rear on the ground. Vessels can load at the docks to sixteen-foot drafts and be well sheltered. First-class booming room for about 15,000,000 feet of logs, 650 booms and chains. We carry boiler insurance, and the inspectors' report this year testifies that everything is in good condition. The average loss of time during the past six years is probably less than three days in the season for repairs, and the quality of the manufacture is among the very best on the Georgian Bay. To build up this property at the present time would cost at the least \$200,000, but we do not care to go back to the active work of running it, and will sell the property free of encumbrance for \$75,000 and on easy terms of payment. There is now a railroad running into Little Current which will materially increase the value of this property. If we do not sell soon, would lease it for a term of years at a reasonable rent, and will be pleased to correspond with interested parties. For further particulars apply to the undersigned.

Thos. Conlon,

44 Church Street,
St. Catharines, Ont.

24-1-2-3

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Miscellaneous

Boiler Tubes for Sale—We have on hand a quantity of 3-inch second-hand Boiler Tubes taken from a 14-foot boiler. Will sell cheap. Stevens-Hepner Company, Limited, Port Elgin, Ontario.

For Sale

Tugboat, 65 ft. over all, 14 ft. 3 in. beam, 8 ft. deep, fully equipped with winches, 10 and 20-in. compound engines, surface condensers and pumps. All connections and pipes brass and copper. Address T. N. McGrath, Tusket, N.S. 20-t.f.

Tenders for Cedar Poles

Tenders will be received by the Suburban Construction Company, c/o G. C. Royce, 90 Sherbourne Street, Toronto, for the supplying of approximately:

2,300 45-ft., 8-in. top, Cedar Poles.
350 35-ft., 7-in. top, Cedar Poles.
100 60-ft., 8-in. top, Cedar Poles.

Tenderers will furnish particulars of the quality of the poles and point of inspection. 2-3

WANTED

Correspondence with mill willing to manufacture full count White Cedar Shingles.

J. E. Harroun & Son,

Watertown, N.Y. 2

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

Location and Uses of Cypress

Cypress grows along the Atlantic Coast and Gulf of Mexico from Maryland to Texas, and in the Mississippi River valley it extends as far north as Cairo, Illinois, at the junction of the Mississippi and Ohio rivers. It is distinctly a tree of the swamps, and more than 90 per cent. of it is found at an elevation of less than 100 feet above sea level.

Extensive cypress forests occur in the delta of the Mississippi, covering several thousand square miles, and also in some of the large swamps of Georgia and Florida, such as the Okefenokee and the great cypress swamps fringing the Everglades. In some places it occurs where the soil is covered with water for weeks or

months at a time, and in a few places the base of trunk is submerged throughout the year. Usually the lower part of the trunk is heavily buttressed and numerous projections, or "knees," are sent up from the roots, probably as an aid in securing air.

Cypress wood has great durability, which adapts it to many purposes for which some other species are unsuited. Census statistics show that in 1911 over 981,000,000 feet of it were used for lumber, lath and shingles, and that in point of annual consumption it stands seventh among the various softwoods, or coniferous trees. It is one of the few conifers which shed their leaves each winter. It is used for a great variety of purposes, such as tanks, cisterns, columns, exterior and interior finish, railroad ties, poles and wharf piling. It is especially valuable for greenhouse construction.

While cypress wood has so many good qualities, the tree itself presents many problems to the forester. Its rate of growth, they say, is extremely slow, so that the cost of producing large-sized timber is great as compared with that of producing wood from other more rapid-growing trees. Furthermore, it does not readily reproduce itself, and there is some doubt as to whether mature stands will replace themselves after being cut.

It is an open question, according to the authorities, whether it will pay to maintain the species in localities where it now occurs. Much of the land upon which it grows is capable of high agricultural development when drained. Even where it might be reproduced, it is not known how this reproduction may be brought about. It is with a view to throwing light on these important problems that Mr. Mattoon is undertaking the present investigation.

Band Saw Pulley Rims

By N. O. T.

Many users are working their large band saws with saw pulleys having absolutely flat faces, while others advocate and use pulleys having slightly rounded faces. Tests will give most excellent results, it is probable that one is better than the other.

For reasons given below, I believe the flat face to be the better. I am aware, however, that some experienced sawyers favour the slightly rounded style, and they have doubtless very good reasons for their preference, and it would be both interesting and instructive if the readers who may have experience in this matter would give others the benefit of same.

The crown is always very small, the rim of the pulley being turned to a radius of about 20 ft., and it is contended—and with some justification—that saws will

keep their positions better on such a rim than on a flat one.

The disadvantages of the crown-face pulley are that it is necessary to use saws more heavily tensioned than when run on a flat face; this heavier tension also necessitates running the saws more tightly strained than would be required when using flat-faced pulleys; also to make the saws run in their proper position on the rounded face pulley it is necessary to give more cant to the driven wheel than when the flat face is adopted.

It is pretty certain that the above facts explain the greater tendency to develop cracks, which saws run on the rounded faced pulleys have.

Many saw sharpeners have no difficulty in getting up their saws so that they will keep their proper position on a flat band saw wheel, even when cutting at a high speed, although when worn down to about 3½ in. wide there is often a tendency for the narrow saws to run forward and come off; also any sawdust which may find its way between the saw and pulley will cause the saw to have a greater inclination to shift on a flat than on a rounded pulley.

The quality of the sawing is generally found to be rather better with saws got up and tensioned for a flat rim; but this in some cases may only be due to the greater skill of the saw sharpener at a particular mill, although I know of one case where after the crown had been taken off the pulley the sawing was better, and they found fewer cracks in their saws.—Timber Trades Journal.

Overproduction and underbuying must be bed fellows.

**FORESTRY DEPARTMENT**

Montreal Engineering Co. Ltd.

164 St. James St., Montreal

Organized to carry on timber limit cruising, forestry surveys and to advise technically and commercially on timber limit purchases and sales.

Staff composed of men with years of training in the Canadian woods.

Review of Current Trade Conditions

Ontario

Stocktaking and holidays have combined to keep the lumber trade on a very quiet basis in Ontario during the past fortnight. No price changes can be noted and no indications of any alteration in trade conditions are apparent, although there is a more hopeful feeling prevalent as to the outlook for spring trade. Hemlock is quiet at about \$20, and spruce mill run is selling at \$20 at the mill. Shingles are quiet and lath are strong and scarce. Southern pine continues to come into Ontario extensively at very low prices.

Hardwood prices are steady and it is hard to say anything definite about trade conditions as practically all the factories are taking stock. Some fair business has been reported of late, however, and there is no question that a moderate amount of good business is going on. The hardwood situation is all right, but there is nothing that one can judge the outlook by to any great extent as yet, because orders are not numerous enough. Stock taking will probably keep the trade quiet for another fortnight.

A heavy fall of snow throughout the Ottawa Valley has improved logging operations to some extent, but much more is still required before ideal conditions will prevail. Trade at Ottawa has improved during the past fortnight and the indications are that there will be a fair business in the spring. Pine s.c. shorts, 1 x 5 in. are about one dollar higher than they were a fortnight ago and mill cull shorts 1 x 4 in., up to 11 ft., also log run basswood have advanced to the same extent.

Edward Clark & Sons, Toronto, Ont., who make a specialty in birch, basswood and brown ash, have this year added another to their excellent series of calendars. For 1914 they have selected a remarkably fine colored painting of a young lady, a study in greens and purples, which is exceptionally striking and effective. The picture is handsomely mounted on gray board and the whole calendar is designed in exceptionally fine taste. The picture, entitled "Elaine," is a reproduction of a celebrated painting by the well-known French artist Dagnan-Bouveret, and has a remarkable history, being the picture of a young lady with whom the artist fell in love, and who subsequently died before he could paint another portrait of her. Accordingly he has flatly refused the most tempting offers for the sale of the picture and only after much persuasion consented to its reproduction.

Eastern Canada

The lumber trade at Montreal is rather slow and there is no noticeable change in conditions. Most of the retailers have been engaged in taking stock during the past fortnight and have not been in the market for new stocks. Supplies of many grades of lumber in Montreal yards are low. Spruce and pine continue firm. Among wholesalers there is a feeling that higher quotations will be made both for local and United States markets in the spring. From many parts of Quebec province, reports of a shortage in the snow fall have been received and there is a general belief that this will result in a similar cut. The demand for lumber for building purposes gives promise of being good during the present year. Trade conditions will depend very largely upon the financial situation. During 1913 the building permits in Montreal made a new high record showing an increase of over \$7,700,000.

Very little stock is now being manufactured at St. John, N.B., practically all the mills being closed with the exception of Stetson, Cutler & Company's, which is sawing 2-in. for the American market and boards for the South American trade. There is very little movement of stocks as owners prefer to hold until spring. Present prices for random are very close to the cost of manufacture. Lath are steady at about \$3 on the wharves at St. John. Stocks are light. Portable sawn deals are a little stronger and are selling at about \$15.25 for 50 per cent. 9 in. and up, the balance 7 in. and 8 in. x 3 in. No city deals have yet been sold for the coming season. Manufacturers are of the opinion that they will do better by waiting until they can form a definite idea of the extent and cost of their woods operations. Men are very hard to find for woods work. Logging conditions are excellent and the indications are that the output will be about general.

The demand for spruce at New York continues quite light. Bill stuff is firm at \$25 base, but random cargoes are numerous and advances in prices are rare. Stocks at New York are much lower than a year ago. Buying continues on a cautious basis, but some improvement is reported. Spruce frames at Boston remain steady at \$25. The demand for random is light and stocks are not too plentiful. More

activity is shown in 2 in. x 4 in. than in other dimensions. Sales are being made at \$22, although a few cases are reported at a little higher price, where extra lengths have been wanted. Two by three is offering at \$21; two by six at \$20.50 to \$21. Stocks of 2 in. by 5 in. are very scarce. They would probably sell at \$20. Other prices quoted are: 2 in. x 8 in., \$22.50 to \$23; 2 in. x 10 in. and 2 in. by 12 in., \$24 to \$25. Sales of these sizes are very scarce. Random spruce covering boards at Boston are offered at \$22.50: No. 2 matched, 12, 14 and 16 feet stock ranges from \$24.50 to \$25. The demand for lath and shingles at Boston has been quiet. Dealers are asking \$3.80 and \$3.85 for 1½ in. lath, but orders are very scarce. The supply of shingles is plentiful. Extra white cedars have sometimes sold at less than \$3.60 of late, but \$3.75 has been obtained for high grade stocks. Clears have been ranging between \$3.25 and \$3.40 and second clears have been selling at \$2.75.

The demand for clipped boards is light, but the supply is low and prices are steady at \$52 to \$54 for spruce extras and \$50 to \$52 for spruce clears. Pine extras are steady at \$55, clears at \$50 and second clears at \$48. Improvement is reported in the demand for hemlock at New York. Retailers' stocks are reported to be badly assorted. The demand for hardwoods at New York is a little more active, but there is still plenty of room for improvement. Maple and birch are strong and can easily be sold at good prices. Maple flooring is steady. At Boston the quotations for hardwoods show no change, but orders are less frequent.

United States

Reports from Chicago state that little change has taken place in lumber trade conditions in that market during the past fortnight. A number of enquiries are reported by wholesalers from country yards, but the volume of orders is small and most of them are of the rush variety. Small country yards are still running on as light stocks as possible and are not doing any heavy buying. Apparently they intend to wait until they know more about the probable nature of business next spring. The receipts of lumber at Chicago during the week ending December 27th amounted to nearly 40,000,000 feet, whereas during the corresponding week of 1912 the total was over 55,000,000 feet. From January 1st, 1913, to December 27th the receipts amounted to 2,783,628,000 feet, an increase of 112,932,000 feet over the corresponding period of 1912. Shipments for the week ending December 27th amounted to 16,238,000 feet, an increase of 1,744,000 feet over the corresponding week of 1912. The total shipments for the year, up to December 27th, amounted to 942,586,000 feet, 54,370,000 feet less than the shipments of the corresponding period of 1912. The northern pine trade at Chicago is quiet, orders being simply for filling old contracts or meeting immediate requirements. Stocks of No. 2 and better are large, but the demand is quiet. There is a good demand for Nos. 4 and 5 box boards and stocks are low.

The holiday season affected the trade in northern pine at Buffalo and very little revival was looked for until the middle of January. Dealers appeared uncertain as to the future of the trade.

Hardwood stocks at Buffalo are in good assortment and appear ample for present requirements. There has been a fair demand for plain oak and some enquiry for a number of other hard woods including birch and maple. No activity is reported in North Carolina pine at Buffalo, but this trade usually picks up soon after the new year. Most of the retailers were taking inventories early in the year and only purchasing small amounts. Some dealers report that a number of the mills are refusing to take new business at former prices and that a further curtailment of output is likely rather than lower prices. Southern pine mills report better prices and light trade on account of the holiday season. Red cedar shingles at Buffalo are a little stronger and some quotations are being made at an advance of ten cents. The demand for shingles has been rather limited of late.

Great Britain

The demand for lumber at London kept up fairly well throughout the month of December, although, during the holiday season it naturally showed some slackening off. The deliveries at London docks ended the year with a very considerable surplus over 1912. For the week ending December 20th the total was 5,935 standards, as compared with 4,356 standards and 4,680 standards in the corresponding weeks of 1912 and 1911 respectively. One of the chief factors in the continuance of the demand is the extensive rebuilding operations which are continually in progress in the more central portions of London. The packing trade has also been very busy and the wood paving demand has continued brisk. A report from London states that shippers



View of Mills in Sarnia.

Quality, Quantity, Service

Look your stock over, and send us an order for what you need or wire for quotations. We always have large stocks of

***Norway and White
== Pine Lumber ==***

Also large timbers cut to order, any length up to 60 feet, from Pine and B. C. Fir.

***Headquarters For
Norway Silo Stock***

Cleveland-Sarnia Sawmills Co., Limited
SARNIA, ONTARIO

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

have lately refused to make any contracts for Quebec yellow pine and elm logs alone, compelling purchasers to take a fair quantity of each, thus driving up elm to a price almost unattainable, and unless a reaction takes place, the report says, there will come an end to the demand for both woods, by other kinds being substituted.

At Liverpool there has been very little actual buying and selling during the past fortnight, so far as the retail trade is concerned. There has been some movement, however, in spruce and pine deals from the quay direct to the railways, which is partly in fulfilment of orders to arrive and partly from stocks on hand. It is expected that the reports of stocks on hand at the end of the year when published, will show a pleasanter situation than some have been inclined to think.

Imports of spruce deals from St. John and Halifax has been confined to small parcels by the winter liners. These are being disposed of at steady prices as they arrive, varying according to specification and quality only. Shippers' quotations have been fully maintained at Liverpool and spot prices have suffered but little by the slackening off of the consumptive request, as importers are refraining from pushing goods, the majority being of the opinion that better results will be attained by carrying their holdings forward. The spruce c.i.f. market continues dull, dealings being confined to minor sales of liner consignments at unchanged prices. Offerings for future delivery are absent and the spot market is flooded, orders being of a retail character. At present there are no indications of widening in the demand.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

Montreal Trade Expecting a Good Year

Montreal, P.Q., January 10th, (Special to the Canada Lumberman):—There is no appreciable change to report in conditions. Trade is rather slow, particularly for retailers, who have been mainly engaged in taking stock. Supplies of many grades of lumber in the Montreal yards are low. The market for spruce and pine is firm, and it is reported that the mills manufacturing spruce deals for export to Great Britain are asking higher prices. Some wholesalers are of opinion that with ordinary conditions, quotations for lumber both for local and United States markets will advance in the spring.

Owing to the small fall of snow, in the province of Quebec, logging operations are restricted, and appearances point to a smaller cut.

Prospects for the present year are fairly good. There is certain to be a good demand for lumber for building purposes, and if the monetary situation is favorable, schemes which have been held over will be proceeded with. So far as 1913 was concerned, the building permits were, in value, the largest ever known. They totalled \$27,408,000, an increase of over \$7,700,000, which was almost entirely due to gains in the last six months. The total does not take into account Westmount, Maisonneuve and Verdun, which form part of Montreal, but whose building does not figure in the values owing to the places having separate municipal governments. In three years the amount of building in Montreal proper has increased \$12,252,000.

Ground wood has been bought freely for account of the United States, and more pulp has been exported during the last three months than in any similar period in the preceding three years. All fresh ground pulp is being steadily marketed, while some of the stocks on hand are also being considerably reduced. There are still three mills with large stocks, but in the severe climate of the Province of Quebec, storage of this wood outside will prevent its being loaded very fast. Therefore any fresh ground wood is at a premium, and this condition will probably create a shortage before spring. The Donnacona Company will start their mills about January 15th with a production of 50 tons of news print and 30 tons of ground wood per day.

The news print market is satisfactory. A Canadian view of the situation in the United States is that a decided improvement has taken place recently, and that in a short time a more pronounced revival in business will be apparent in all grades of paper. This will undoubtedly help the sale of Canadian pulps.

The chemical market is fairly good. Some good orders for the United States have just been received by Canadian mills.

Ottawa Trade Showing Improvement

Ottawa, January 6, (Special to the Canada Lumberman).—The recent fairly heavy fall of snow throughout the Ottawa Valley has helped along operations in the lumber camps to some extent, but not as much as desired. If a good output is to be secured there will have to be much more snow and frost to facilitate logging in the woods.

Within the past week there has been a noticeable improvement in the trade. A canvass made of several of the leading lumbermen here elicits the information that prospects are shaping for a fairly good run of business in the spring. There have been a few alterations in prices lately. Pine s.c. shorts 1 x 5 in. have advanced \$1, and mill cull shorts 1 x 4 in. up to 11 ft. and two grades of basswood log run have also gone up a similar amount.

According to the custom followed in other years, the Estate of James Davidson closed down at Christmas time for two weeks, so that the machinery in the woodworking plant could be overhauled and repaired.

The Royal Commission recently appointed to investigate the cost of living in response to a widespread agitation, will, it is learned, in-

quire into the causes which have sent the price of lumber up to a high plane. However, as it is generally understood that higher prices in lumber are due principally to conditions over which lumbermen have no control, it is not likely that the commission will need to probe very deeply into the matter.

Mr. E. P. McGrath, managing director of the Greater Ottawa Lumber Company, was a candidate for the board of control in the civic election here which closed yesterday. He was defeated by a small majority.

Mr. J. R. Booth, who was injured rather seriously some time ago, is making good progress towards recovery. Every fine day he spends a few hours on the verandah of his house. It is expected that he will be able to be around again in a few weeks' time.

New Brunswick Loggers Having Good Winter

St. John, N.B., January 6th (Special to the Canada Lumberman): The manufacturing end of the lumber business, in so far as this city is concerned is about at a standstill, with the exception of Messrs. Stetson Cutler & Company, who are running their two mills, sawing largely two-inch for the American market, with a large quantity of boards for the South American trade. Insofar as shipments are concerned, very little stock is moving forward to the American market from this port. The manufacturers who have anything, prefer to wait until later in the season and ship on the early spring market, when the demand as a rule increases. At the present time, prices for random stock leave very little margin for shippers of American stocks. The supply of sizes for the American market, is practically all in the hands of Stetson Cutler & Company at this port, and is probably in the vicinity of ten millions. Laths are steady at about \$3 per M. on the wharves here, but stocks are light, as any shipments taking place, from this point of late have been laths instead of long lumber, for American ports. It is hard to set a price for long random for the United States trade, as buyers are hard to find who will take any cargoes of an extensive size. What stock is moving here is largely car stock, shipping through here from interior points, being sawn by rotary or portable mills in the woods and hauled to cars. Very little if anything can be said of the English market, some stocks are going forward by liners but shipments are not necessary. Prices are steady. If anything they show an improvement from early fall, especially with regard to portable sawn deals, which have probably advanced from a low level, to the same prices as paid for them in the fall of 1912-13, viz., about \$15.25 for specifications running 50 per cent. 9 in. and up, balance 7 in. and 8 in. x 3 in. No sales of city cut deals have yet been made for the coming season and it may be said that the manufacturers will undoubtedly wait until they see how their woods operations are coming along. Men are extremely hard to find for woods work, all over the province, and the cut of logs will only be normal, should the ideal conditions for lumbering remain as they are. Any less snow will reduce the cut of logs to below normal. Prices of labor, supplies, etc., are higher than in 1912-13, and it is felt that prices for logs will be higher than last year.

The building trade is about at a standstill, no new buildings, if any, will be started until early spring. The work of finishing up the old contracts is about through.

The Woodstock Lumber Company of Boston, Mass., have opened an office in the Canada Life Building, Prince William Street. We wish them every success as they enter into competition for the American product from this port and interior.

Conditions for lumbering are ideal all over the province, snow being to a depth of from 6 inches near the coast to 18 inches farther inland, and the work of hauling logs to rivers is now being carried on in good earnest.

DRY SPRUCE BOARDS

WE have them and can ship promptly now, but cannot promise to do so later because the annual car shortage will be with us.

¶ We have the largest stock of dry Spruce boards in Canada. Our assortment is now complete, but with the volume of orders we are receiving we will be short of certain items before long. If you are going to need Spruce boards this Fall, order early and make sure of having them when you need them.

¶ When ordering get the best,—the Silk Finish kind,—from the most reliable source, from the people with the most up-to-date dressing mills, the most efficient service.

John Fenderson & Co.

Incorporated

Sales Office

27 Besse Place
Springfield, Mass.

MILLS AT

Sayabec, Que. Cedar Hall, Que.
Salmon Lake, Que. St. Moise, Que.
Jacquet River, N. B.

**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

Wm. E. Hill Company's Products

The products manufactured by Wm. E. Hill Company, Kalamazoo, Mich., include complete outfits for sawmills and wood cutting plants. The company is so well known as manufactures of the "Hill Steam Niggers" that they wish to draw particular attention to their other lines of machinery as well. Their special line of wood cutting machinery is of much interest and includes several types of steam drag saw machines for cross-cutting logs, steam dogs for holding the logs while being cut, and an extensive line of steam splitters both for 4-foot wood and block wood, any diameter, together with fibre stock for pulp mills. One of their products which is in specially strong demand is their spike concave rolls for bringing logs to the saw. They also furnish steam and hand ratchet rigs for those who prefer them.

In addition to the above lines, Wm. E. Hill Company manufacture vertical automatic centre crank engines from three to twenty horsepower inclusive, suitable for driving filing room machinery, fans, blowers, dynamos, etc.

Their advertisements will appear in subsequent issues of the Canada Lumberman and will be interesting and instructive to any of our readers who wish to install machinery of the above nature. The company have been in business continuously at Kalamazoo, Mich., since 1881. From that date until 1912, it operated under the name of Wm. E. Hill & Company. The business was then incorporated under the name of Wm. E. Hill Company, by which it is still known.

Motor Headworks for Boom Towing, etc.

Russel Bros., Fort Frances, Ont., have designed and placed on the market a small, strong, high-power gasoline boat, built of the choicest timber, to take the place of "head-works" or "floating platforms" for "horse-capstans," in connection with logging operations carried on by lumber and pulp companies. The old method is an expensive and difficult one to handle and Russel Bros., claim for their "motor-head-works" that it eliminates much of the cost and trouble in connection with this work. It is the outcome of many experiments with a view to obtaining the greatest amount of power per floating weight. The construction is light, simple and so durable that the cable will part before the boat or machinery will give way. This displacement is about 8,000 pounds, and with a 30 h.p. engine, the machinery will exert over 2,500 h.p. pull on the cable. When running under propeller, the boat makes from six to seven miles an hour, and is a very powerful tower. The hull is constructed of white pine, oak and tamarac, barge style, the sides being 4-in. thick, bottom and ends 2 in. and sheathed forward with steel. The length is 30 ft. over all by 7 ft. beam, 24-in. draft and from 14-in. to 24-in. freeboard, with an 8 ft. deck fore and aft. Two 4-in. x 6-in. tamarac metal sheathed skids run from bow to stern and are used as runners when portaging. They also extend aft beyond the propeller and rudder, protecting them when running among logs or jumping booms. The cabin contains a folding bunk for the engineer.

Near the front of the cockpit is a drum holding 2000 feet of half inch steel cable, which is connected by a powerful chain of steel gears with the forward end of the engine shaft, through a friction clutch. The gears provide 4 changes of speed and the release of a positive clutch in the drum head permits the cable to be run out free from all gears. Keyed securely to one end of the drum shaft is a "niggerhead" which turns with the drum or independent of it and from which a line may be used fore and aft. An automatic interlocking device prevents the gears from being changed when power is on. Power cannot be applied when the gears are not fully in mesh. Thus there is no danger of stripping. The arrangement of steering wheel and levers is such

that only one man is required to handle the boat when running under propeller or cable power.

When a "shore hold" is not available, a 250-pound patent anchor is used. The engineer will run approximately 2,000 feet from his tow, drop anchor, return and couple tow to tow post, then wind in on cable at whatever speed he considers advisable.

It will be seen that this "motor-headworks" is of great value around a mill boom. Its chief advantage is the relatively low cost of operation, as compared with "horse-headworks and anchor boat."

A "motor-headworks" only requires four men; an engineer, two logmen and a cook. When a rapid has to be passed it can run any that are passable or it can portage itself if necessary. It is of light weight and can be loaded on a tote sleigh and taken into the head waters or small lakes at very light expense. Its crew consists of one engineer, one fireman, one wheel man, four logmen and one cook. Its advantages briefly stated are that it requires less stores; needs no wood barge; involves no time lost in "wooding up;" is lighter to portage; can be carried on a tote sleigh and involves no lost time in getting up steam.

Small Lumber Cut on the Nashwaak

The lumber cut on the Nashwaak River in New Brunswick this winter will be the smallest in half a century, according to reports from the camps. In years gone by the cut on the Nashwaak has ranged all the way from eighteen up to thirty odd million feet of logs, but this year it will not exceed four million feet. Alex. Fraser, who has operated on the Nashwaak for years, will take out upwards of half of the total cut this winter, while Justus Manzer and Angus Urquhart will cut the balance. The curtailment of the Partington Company's operations on the Nashwaak this winter is due to the fact that practically their entire cut of last year was hung up last spring in the streams and did not reach the mills. Mr. Fraser reports said that conditions for carrying on operations had been favorable so far this season.

Inspecting Stanley Park Timber

Mr. G. H. Edgecombe, a British Columbia provincial forestry expert, has commenced an inspection of the trees in Stanley Park, as a result of the representations made by the Park Board to the provincial department, seeking a report on the diseases affecting the trees, as exposed by Dominion tree pest inspectors recently. The Dominion forestry department also intends to send out an expert on tree diseases in a short time, who will make a report to his department. The Park Board expects to be able to take decisive steps in dealing with tree pests, upon receipt of these two reports.

One of the largest lumber cargoes ever shipped from Victoria, B.C., has been placed under charter for the American ship Aryan for February, loading at the Inner Harbor mills of the Canadian-Puget Sound Lumber Company. The Aryan will load 1,750,000 feet of British Columbia lumber for Delagoa Bay, South Africa. There has been an extensive movement in lumber in recent months from Victoria to South Africa. The announcement of the charter of the Aryan comes almost simultaneously with the departure of the American schooner Inca, which completed loading 1,250,000 feet of lumber at the Inner Harbor mills for South Africa.

The B. Grenning Wire Company, Hamilton, Ont., have sent out an attractive calendar containing a colored illustration of their large plant and offices. The calendar pad is large and the type is especially suited for office purposes.

E. H. Heaps & Co., Ltd.

Lumber, Shingles, Doors, Mouldings, Finish, etc.

Specialties: **AA1 BRAND HIGH GRADE SHINGLES**
LONG FIR TIMBER

Mills at
Vancouver and Ruskin, B. C.

Head Office: **445 Hastings Street West**
VANCOUVER, B. C.

With the
Compliments of the Season
The Manager and Staff
 of
The Saw-Mill Owners Sales Co.
 Montreal - Canada

The Shaw
Motor-Headworks
 or
Gasoline Warping Tug

ORIGINATED BY LOGMEN TO
 TOW LOGS

Light
 Powerful

Enough to Portage

On a Tote Sleigh
 Itself

Speed under propeller 7 miles per hour.

Towing power 2 million feet.

OPERATED BY ONE MAN.

Manufactured by

RUSSEL BROTHERS
 Fort Frances, Ont.



PEAVIES

Cant Hooks, Boom Chains, Timber Dogs

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

Jenckes Boilers

WE make a specialty of large Tubular Boilers for regular or Dutch oven setting for saw mill service. Our Boilers are built to conform with the various Provincial Inspection Acts and each is rigidly inspected and tested under high pressure before shipment.

Ask for quotation.

The Jenckes Machine Co.
 Limited

Sherbrooke - Montreal - St. Catharines - Cobalt - South Porcupine - Vancouver - Rossland
 Works: Sherbrooke, Que., St. Catharines, Ont.

Fancy Woods and Veneers

THEIR ORIGIN, VALUE AND
USE—COMMENT AND VIEWS
ON AN IMPORTANT BRANCH
OF THE TRADE.

Foreign Veneer and Panel Manufacture

By J. B. B. Stryker*

I have been asked to make a comparison of American and European methods, as applied to the veneer and panel manufacturing industry. While not a manufacturer of these products myself, I have come more or less closely in personal touch with factory conditions, etc., in America and certain European countries, namely, England, France, Austria-Hungary and Germany. So I will give the conclusions on this subject which I have reached as the result of observation on the ground.

I fear that, in one respect at least, this paper will not afford the help which I desire it to. This refers in particular to the fact that in my visits to veneer, panel, furniture and kindred plants in Europe I observed but little having to do with mechanical methods or preparation of veneer, stock, etc., or of construction which I can present as being an improvement on the methods of American manufacturers.

When it comes to the question of the finished product we must admit that much of it shows up exceedingly well, in fact, better than ours.

The cutting of veneer and the manufacture of panels, tops, etc., in Europe, dates back much farther than it does in the United States, and this is only natural, the age of our country and theirs being considered. However, to-day, the United States leads Europe in the number of plants in operation, the amount of output and the general magnitude of the business. In France, for instance, veneering has been done for hundreds of years, but instead of being carried on as they are now learning to do it, it was done in a very small way indeed. Where veneered lumber was desired, the small cabinet maker would cut his own veneer; the product he then obtained should be more properly called by the name of thin lumber. Two men were employed in the operation, the log being placed with each end on a high saw-horse or platform, and the veneer sawed off by hand, one man under the log and one above, pulling the saw up and down much after the fashion in which two-man cross-cut saws are operated in our timber camps to-day. This method may even yet be seen in use in remote localities over there.

To-day there are some veneer and panel plants in almost all the countries of Europe, Russia undoubtedly leading the list in the number of plants being operated and the amount of production, followed by France, Germany, Austria-Hungary and England in the order named. Italy, Belgium and some of the other smaller countries do something in this line also, but little is being done in Spain, I believe. Russia ships her product to the other countries of Europe, large quantities going to France, and to England particularly. Although I did not see the plant myself, I was told on very good authority that one Russian concern had nine American veneer lathes in operation in its plant. Speaking of shipments being made from one European country to another, as freight rates are considerably higher over there than they are in the United States, it occurred to me that England should offer a good market for American manufactures. That country being a free trade country, except on a very few commodities, and with no duty on the commodities under consideration, it seemed to me that a plant on the United States seaboard might be able to do a considerable amount of business in England. Bear in mind in this connection that all timber products consumed in England must necessarily be imported from abroad, there being no native timber supply in that country. I was greatly impressed in Liverpool when I saw the immense stocks of mahogany logs which were carried by the dealers in that city. For six or eight blocks along the river front mahogany logs were piled to a height of twenty or thirty feet. These were in the yards of different dealers and the logs were auctioned off piecemeal to the highest bidder, the idea being that in disposing of them in this manner the best prices would be obtained, as each log would bring the most it was worth.

I judge the American manufacturer is most interested in methods for obtaining better veneer and panels, or cheaper methods of manufacturing them, or both, when they can be both obtained in combination. While much that is produced in these lines in Europe shows up very well, it is not produced as cheaply as it can be produced here, this in spite of the fact that labor over there is much cheaper than here. The average European workman, while steady and conscientious in the carrying out of his work, does not seem to admit of the speeding-up that the American does.

As evidence that the American manufacturer is in advance of the

manufacturers of Europe, I would cite the fact that in the largest and most progressive plants over there machinery of American design and manufacture is in evidence almost everywhere—veneer lathes and appliances, trimmers, dryers, taping machines, glueing appliances, sanders, scrapers and much machinery of a kindred nature. I have been in a plant in England, for instance, which is engaged in the manufacture of phonograph and talking machine cabinets, and in furniture factories in Vienna where I have seen so much American machinery on all sides that it made me homesick. The hydraulic press has heretofore been used to a large extent over there than here, but they are now adopting it as time goes on, and those of American make seem to again have the preference. Furthermore, in many instances where machines are not American made, they are such a good imitation that it seemed to me they were modeled as closely after our own as it was possible to make them.

Naturally with so much American made machinery and appliances in use in their plants their methods must rather closely conform to our own. During the past few years I have known of numerous instances where Europeans have come to us for ideas and methods, but I believe it is a rare thing for us to go to them with the same object in view. Although American made or modeled machinery is so largely employed by them, the production of the average plant, comparable with ours as to size, equipment and number of men employed, falls considerably short of the production turned out here. In addition to veneer and panel plants, I visited several factories engaged in quite different lines of manufacture, and my impression gained thereby was that the American manufacturer, given an equal investment of capital, will generally turn out a considerably larger production. The European manufacturer, regardless of the particular line of work in which he is engaged, is very apt to give more attention to details, and there is more time spent on details than usually prevails in the average American plant.

They prepare their logs much as we do, usually boiling or steaming them. The cutting of the veneer is the same, as is the subsequent drying also. In Austria-Hungary and Germany the alder is largely used for core stock. Five-ply work is usually laid up in the same manner as here, but in Vienna, which in Austria is considered as the home of fine furniture (and some beautiful work they certainly turn out), I saw Circassian and mahogany tops laid up three-ply, the veneers being laid on three-fourths-inch or seven-eighths-inch alder cores, sometimes with the grain and sometimes across the grain. I believe that the American manufacturer usually considers that high-class work of this nature can be done only by the use of cross-banding. I should say that the preparation of the veneer and the building up of same into panels, tops, etc., in the white, was no better than here, but the finish they put on their work in many cases excels ours. Labor being cheaper, they can afford to spend more time on this part of their operation. As one Austrian long in the business expressed it to me, "It takes the human touch to get the right finish." While I am unfamiliar with the materials generally used for finishing purposes, both here and abroad, I understand that at some points in the finishing process they use materials little, if ever, used in this country. The deep appearing finish which they obtain, I consider, is very pleasing to the eye. Beech is used largely in France in the making of panels, as it is a comparatively cheap wood in that country. To-day three-eighths-inch veneered panels are in demand there for use in places where they before have been in the habit of using thin, solid lumber, as much trouble was encountered with the latter on account of splitting.

In Germany quite a business is maintained in the manufacture and sale of "wood plates," as they call them. These are made up three, five and seven-ply, being about three-fourths, one and one-fourth and one and three-fourths inches thick, respectively. These are made up to as large as six by twelve feet and sold for various uses, such as beds of printing presses, billiard tables, etc. The large sized plates are oftentimes bought by the users without regard to the particular purpose for which they are to be used, and they are then cut up into different sizes as required.

In London there is a panel factory which struck me as being unique. In this plant there is not a single power driven machine, the reason being that there is a law prohibiting the use of any power driven machinery in the district in which the factory is located. In making panels they place the centre stock on the floor and the glue is applied by hand with a large brush. This plant presented an instance of modern and obsolete equipment in that it had several hydraulic presses which were worked by a hand pump, while, on the other hand, the glue was kept in condition by placing the bucket in

* Address delivered before The National Veneer and Panel Makers' Association.

Mr. Lumber-Dealer
Mr. Car-builder
Mr. Ship-builder



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which it was contained over a gas flame. The method of handling resulted in a great deal of blistered work, which was repaired by placing a wet cloth over the blistered portion and then running a hot flat-iron over the wet cloth until the veneer was stuck down.

In Germany I saw a veneer clipper, a description of which may be of interest to some of you. It is built along the lines of an ordinary veneer clipper, but it is very much more powerful than those ordinarily used in the United States; the knife comes down very slowly on an angle of somewhat less than forty-five degrees. This machine clips the ends off from a whole flitch of sliced veneers at one time and leaves so clean a cut that the ends can be spliced into a perfect joint. It is used for cutting the veneers to proper length and width, and also for jointing veneers ready to splice. The splicing is done by young girls who tack the edges of the veneer to a board and then stick a strip of gauze tape over the joint. On the tops turned out by this concern cross-banding and back veneers used are nearly all one-twenty-fourth-inch poplar, with a very small proportion of such sliced oak veneers as are not good enough for face stock. The face veneers used are sliced one-twenty-eighth-inch black walnut and plain sliced one-twenty-eighth-inch oak. All five-ply work is glued in two operations, that is, the core is first veneered with the cross-banding and when this comes out of the bales in which it sets over night it is put on sticks and left to dry out for six days. It is then taken to the sander where one-half of the cross-banding is sanded off, thus leaving the cross-banding about one-forty-eighth-inch thick when the face and back veneer are put on. When this is finished it is left on sticks another six days before the face and back veneers are sanded. Upon inquiry it turned out that the main reason for glueing-up this five-ply stock in two operations, and giving it the twelve days' drying out, was that, inasmuch as the operators wished to lay up the veneer slightly damp on the theory that it would lay flat, and cause less trouble in splicing, there would be less likelihood of the finished work drying out and checking afterwards.

In Austria I saw a machine which to me was something new. This was a miniature lathe, specially constructed for the purpose of turning down the cores from the large lathes. These cores, of an original diameter of from five to six inches, were placed in this small lathe, or "coffee grinder" as the owner of the plant called it, and turned off until a core of only about one and one-half or one and three-fourths inches diameter remained. The veneer produced by this small lathe was naturally not of a quality suitable for anything outside of core stock, to be used on the cheaper grades of panels, etc., but for this purpose the veneer thus recovered, and which ordinarily would have gone to waste as cores, answered the purpose just as well as veneers cut from the original log.

In making any sort of comparison whatsoever between American manufacturing plants and methods and those of Europe it should be remembered that, generally speaking, manufacturing operations are carried on in this country on a much larger scale than they are in Europe. Of course manufactured products of all kinds are consumed in Europe, as a whole, in great quantities, but these commodities are usually turned out from factories having a smaller output than ours, the result being many factories with a small output rather than a relatively smaller number of factories with larger outputs. This has a tendency to allow of much closer supervision, wherein the personality of the workman or operator can be made to enter. The wages paid in Europe vary more or less for the same class of work in the different countries. England undoubtedly heads the list in this respect, followed by France, Germany, Austria-Hungary and Russia in the order named. It is no uncommon sight over there to see the father and mother and all the children working together in the same plant, but it struck me as entirely new and novel to see women working as hod carriers and railroad track laborers.

We are very apt to complain of high taxes, but as compared to taxes in the most of Europe ours are exceedingly reasonable. For instance, I was told by an Austrian manufacturer that the government expected ten per cent. in the way of taxes, based on the net profits yearly realized from his business, and that they were supposed to pay 25 per cent. yearly of the gross income realized from any property owned and rented by them to other parties. In answer to my inquiry as to whether or not this excessive rate of taxation was actually collected, and if not, what was done about it, he smilingly replied that in Austria the citizens paid their taxes the same as they did in America. As this gentleman had visited America on several occasions, I had nothing more to say on the subject. I cite this instance in regard to the rate of taxation simply in order that, when things seem to go wrong, you may have the satisfaction of remembering that there are other people who are not so well off as we are.

The sum total of the impressions which I received by reason of coming in contact with the European conditions and manufacturers was that they would follow the lead of American manufacturers so far as the veneer and panel business was concerned, and they are quite willing, I believe, to acknowledge this fact. Furthermore, it behooves us to remember that they are very apt pupils.

Beech Becoming Important As A Veneer Wood

The use of beech as a veneer wood has been very largely confined to the production of material for various kinds of baskets and for plain veneer work. It has not entered into veneer proper as extensively as it might and has not been regarded as a face wood to any appreciable extent, although at times it should prove quite attractive if properly finished. A bulletin, recently issued by the Department of Agriculture at Washington, states that beech ranges from the Gulf of Mexico into Eastern Canada and that the estimated quantity available for use is between 10 and 20 billion feet.

Beech is one of the hardwoods that the pioneers did not find much use for because it would not split readily into rails, more plentiful than the supply of other woods, and practically everywhere it has been held in low enough esteem that beech logs are purchasable at cheap prices as compared with other timber. Since the extensive development of creosoting wood to preserve it, there has been more demand for beech for railway ties and this has taken out some of the stumpage. There is, however, quite a supply of beech available for basket and veneer work and it is used in fairly good quantities in basket making but not to the extent it might be for veneer making. Neither do the manufacturers of veneer from beech seem to realize that there should be a chance to use it for face work now and then.

Here and there one can find some solid beech lumber used for house trim and it finishes off beautifully. It shows up well enough and it seems remarkable that we have not had more of it used in table tops and flooring. Also for paneling and in millwork because curly beech is pretty closely related in appearance to curly sycamore, and the sycamore is sometimes sought after for the beauty of its figure in face work. In the matter of plain veneer and panels, beech is said to be particularly good for drawer bottoms. The best drawer bottoms these days are from three-ply veneer built up, and in this work experienced veneer and panel men say that beech gives splendid results—indeed some have expressed the opinion that it is the best wood for drawer bottoms available.

Good for Drawer Bottoms

There are some specific reasons for the good quality of beech for drawer bottoms and other panels, and one of these is that it is hard, firm and stiff. It is one of the stiffest woods going, therefore a comparatively thin panel of it will strongly resist bending. This makes it a splendid wood for chair bottoms and it is one of the things that makes it valuable for drawer bottoms. Also it should make it a very desirable wood for the large three-ply thin panels used in the packing cases in the east. Another important quality in beech is that after it has once been thoroughly dried out it will not absorb much moisture. Stating it another way, this means that it will do but very little shrinking, swelling or warping after it has once been thoroughly dried. This is a very desirable quality in all cabinet wood, and it is especially desirable for certain kinds of work. That is why beech is extensively used for table slides and wherever slides are called for in furniture or cabinet work. It is hard and smooth and is not inclined to absorb moisture and swell.

That is one of the reasons it is a valuable wood for drawer bottoms. It will keep its shape and retain its dimensions and just fit snugly into its groove and give satisfaction in service as well as in appearance when first put up.

It will be seen from the above that basket manufacturers have attractive opportunities for developing markets for beech veneer products and thus getting more profit out of their lumber. The basket manufacturer who has a greater cutting capacity than is required for the factory itself, should be able to develop a market for beech veneer to be used for panels or for building up into panels and also for drawer bottoms. Some beech veneer is quite attractive enough to be used as a face wood in cabinet work and it seems likely that a recognition of this fact could be secured, if those interested would submit some good stock and have it finished in such a manner as to show its attractions.

The wide market for beech veneer for boxes, baskets and cratings is remarkable. In the city of Maine for instance, a thin veneer of beech is made especially for the Sicily, orange and lemon box trade. Beech, while a little heavier than some woods is so stiff that it can be used in comparatively thin woods and give good results in light baskets. Beech is used for drum hoops, embroidery hoops and rims of various kinds, many of which can be made by a veneer process. It is an excellent wood for picnic plates and for various uses in wooden ware. The public is commencing to realize this fact and the time is opportune for basket manufacturers who are using beech to realize that there is probably more profit to be secured from beech to-day than in the past. Makers of filing cabinets and sectional book-cases appreciate beech perhaps more than the average furniture manufacturer. The principal fact brought out by the bulletin referred to above, is that, as a veneer wood, beech should have a much more important place in the future than it has in the past.



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Estimating and Making Prices for Millwork

By John P. Larson*

Perhaps one of the greatest evils and one least understood by the different estimators is the pernicious habit of basing their bids on a low grade lumber, with a corresponding price, without taking into consideration the great amount of waste which must be cut out of such lumber on the one hand, and the greatly increased labor charge on the other. No. 1 shop lumber is bought to cut 60 per cent. clear for shop purposes. If the price of shop is \$30 per thousand, and you require one thousand feet clear cuttings for sash and door purposes, it would be necessary for you to bring in 1,670 feet of this lumber, which would cost you \$50. You can get the same amount of cuttings out of one thousand feet clear lumber, which will cost you less than the 1,670 feet shop lumber costs you. Of course you may be able to get something out of the 670 feet waste in the shop lumber, but to offset this it will cost almost twice as much for labor to work the 1,670 feet shop as it will the 1,000 feet clear.

For two-sided work, such as sash, doors, panels, etc., the price of clear lumber should always be used in estimating, because even if it is cut out from lower grades, it will cost as much in the end. For casings, base, mouldings and other lineal stuff, nothing below a grade of lumber which is clear on one side the full length of the piece can be safely used.

Then, too, it must be remembered that even where clear lumber is used, there is a large percentage lost in cutting. Here is one of the pitfalls of estimating. It is doubtful if under the most favorable circumstances it is safe to figure less than 15 per cent. waste in soft woods of good quality. Of course, this waste is greatly increased in the case of hardwoods, where both lengths and widths are less desirable, and here the waste will probably average from 25 to 35 per cent., based on a clear grade of lumber. This, of course, does not take into account, when lumber is selected with a special purpose in view, where waste in cutting may be eliminated altogether. But in such cases either the selection will cost more money, or it will depreciate the remainder to such an extent, that it will not affect the general result.

Waste As An Element of Danger

To show just how dangerous this question of waste really is, I will cite you a case in our own experience not very long ago. We had an order for a lot of casings, in plain red oak. It was a special order, and looked very innocent and very desirable. It was all to be run of one pattern, one width, and nearly all of it of one length. There were five or six hundred pieces altogether. The dimensions were $\frac{7}{8}$ x 8-6. The net amount of lumber in the order, as I remember it, was about 3,500 feet. We had to bring in between 7,000 and 8,000 feet of lumber to complete that order. Of course, there were some cutting left over, but you can draw your own conclusions as to their value.

You will therefore readily see that the initial cost of the lumber while important, is not more so than the question of waste. If an article after being manufactured contains a certain number of feet of lumber, it is surely a dangerous thing to base the price of such an article on the net feet of lumber it contains. Rather it should be ascertained how much lumber was required to do the job, before the waste was taken out of it.

The average mill man (either estimator or owner) is the original optimist. Were this not so, they could not expect to get through with the prices that are being put out—and live. Someone has said that his idea of an optimist is the man who thinks he can make a living out of four hens and a back yard 10 feet square. But I want to tell you in all seriousness that this man has a better show to make good than we have at the prevailing prices of millwork.

Estimators Have Much to Answer For

As estimators you have much to answer for. Did it ever strike you that your particular mission here is to make money for the boss? You are not doing it. Are you preserving what he has? I doubt it. If the millwork industry was ever entered upon for the purpose of making money, it has been forgotten long ago. Everybody connected with it seems to have gotten out of the habit. That gain should have any place or be reckoned with in any way in our business seems to have been overlooked altogether. Your efforts at the present time are not directed to making money for your house, but to prevent the other fellow from getting the business. If your concern would turn over to you its cash-box and bank account amounting to a few thousand dollars, very likely it would be taken care of, conserved, and a strict account of it given. When that same concern turns over to you its lumber yard, its factory and pay roll amounting to say \$50,000 to \$100,000, or even upwards, a year, are you ready at the end of the year to render an account of your stewardship? And will your master be in position to say, as did the master of old, when his servant brought back to him the pound originally entrusted to him with two pounds added there-

unto,—“Well done thou good and faithful servant; you have been faithful in small things, I will make you ruler over many things.”

But you are not to be blamed for all of our ills. The employer is equally guilty. The man who allows his business to be carried on at a loss is a poor manager. However, it is a part of your duties as estimators to prevent the taking on of unprofitable business. You should know whether or not a certain job is profitable. If it is not, then you should oppose with all your might the submitting of a bid which, in your opinion, is too low, and I doubt very much if your employer will persist in putting out a bid over your protest. You can often make more money for your concern by refusing business than by accepting it, and yet how many of you have the courage to do this? In fact, there is no courage anywhere. It is craven fear at every turn, and you fear each other, most of all. You suffer the agony of fear every time a bid is submitted, either because you fear you are not low enough to be lower than every body else, or that you are so low as to make yourself ridiculous. Profit has no place in the calculation. Alas! how often after a long hard struggle and much scheming, you have been enabled to find out the lowest bid on a certain job, and your standing was such with the contractor that he allowed you to put in a revised bid below the lowest and you “brought home the bacon,” and swelled up with pride and self-satisfaction because you have put one over on the other fellow. But did you really put it over? Could it be positively known, the chances are that you were the fellow that was taken in, and that instead of bringing to your institution a live thing, you have brought a corpse—a deadhead, whose gruesome visage grins in derision at the efforts of foolish men.

I have seen within the past few weeks the two highest officers of one of our mills go together to plead for the securing of a contract which they themselves admitted would yield no profit, and which in the opinion of many was below cost. Conditions like these are deplorable. It lessens the dignity of our business and robs us of our self-respect. These conditions have not only been created by ourselves, but are being perpetuated and intensified.

It is up to you to change and better these conditions. The employers must co-operate with you. It is nothing less than a crime, with millions of dollars invested, men employed and families dependent for their daily bread on the success of the enterprise, that we allow conditions to remain as they are. To say there is no remedy is idle talk. There always was and is now a chance to make money in the mill business. It is fear and greed that stand in the way. Fear of your competitor and greediness in yourself. You must change your methods. Instead of destructionists, you should become constructionists. Your own future depends upon it. Are your salaries increased from time to time? I will answer that question myself by saying that they are not. The reason is plain. The mill owners cannot afford to raise salaries. The blame for this must to a large extent be laid at your door. A salesman (and you are the salesman for your output) fixes his own salary. If he can show that he is making money for his house, he can dictate his own terms.

More Than Salesmen

Then, too, you are more than salesmen. In some cases you are the sole representative of your house. This should be borne in mind. You should fit yourselves to take the places, some day, of the men you now serve. This you can only do if they succeed. Their success means your success.

Many of you have endured long years of service, have made many sacrifices in the line of duty, have given liberally of your own time and effort, and yet you have not materially bettered yourself financially from year to year, nor have you advanced the fortunes of your employers to any marked degree. The reason you have not bettered yourself is that you have not put your employer in position to do so. Both have failed to reap the fruit of their labors. You have, indeed, sown, but from the seed put forth you could not expect to reap benefits either for yourselves or others.

I have indicated some of the evils in our business and have hinted at their remedies. If some things have been said which seem harsh and which should be laid at the door of the owners and managers, rather than at yours, they have at least been said in the spirit of kindness. I am convinced that our troubles are due largely to a lack of education, true insight and grasp of the situation.

At a meeting of the Council of the Montreal Board of Trade, held on January 7, a communication was read from the Montreal Lumber Association, calling attention to the fact that, although the Transcontinental Railway is almost completed, Montreal has as yet no direct connection with that railroad, and asking the Council once again to take up the matter with the Government. It was pointed out that Montreal interests have suffered and will continue to suffer serious disability until a connection has been secured by the most direct route possible. The Council, which has previously pressed this matter upon the Government, will again take up this question.

* Address delivered before the Estimator's Club of St. Louis.

One Key to Success is Action

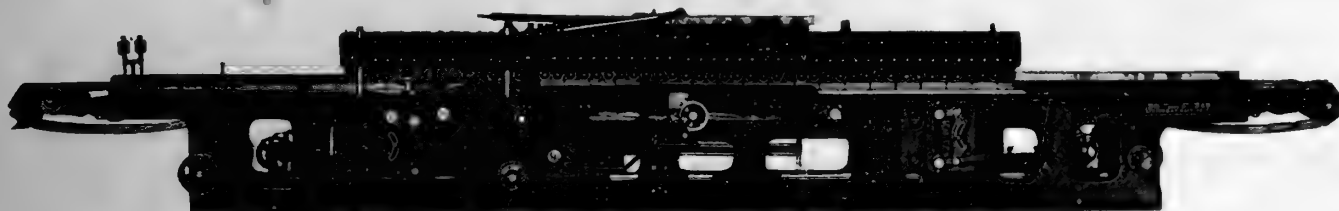
A concern may have all the attributes and yet fail in obtaining their full measure of success.

The Dominion Box & Package Company, Limited

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listened to the story of the Linderman Dovetail Jointer, recognized its possibilities, investigated its daily performances and then acted. After five months' trial they acted again.



So that each day in the week they are saving over ten dollars for each machine.

Read what they say—

DOMINION BOX AND PACKAGE COMPANY

LIMITED

MONTREAL, CANADA

June 25th, 1913

Messrs Canadian Linderman Co., Ltd.
Woodstock, Ontario

Gentlemen :—

Answering yours of June 23rd. regarding the matter of Economy in the use of your machines would say that it is pretty early yet to make any definite statement as to the ultimate saving by this process. The gross saving in our case amounts to about \$4.00 per day in labor and about \$4.00 or \$5.00 per day in lumber per machine, not to mention of course the very superior job which we secure and the fact that we can have solid stock of any size at any time. What our net saving would be considering the repairs necessary as against the groovers and squeezers heretofore used, we are of course not in a position to say at this time. If the 8' machine operates as continuously and satisfactorily as the 4' machine has done we are inclined to think that the repairs and replacements on the Linderman Machine would be about the same as upon the groovers and squeezers replaced by them.

We are sorry that we cannot give you more definite information, but you will realize that it is a little early to quote exact figures. In any case, however, we are well pleased with the process and the results and intend to make these figures safe or better them by eternal vigilance in the matter of maximum output and minimum repairs.

Very truly yours,

C. B. FULLER, JR.

Superintendent.

Skepticism is a good thing when used in moderation but when kept up too long prevents real success.

You can increase your profits ten, twenty or even thirty dollars a day. May we show you how?

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The timber on the Pacific Coast is the last stand of the great forests. Well selected timber in British Columbia is the best investment on this Continent and offers especially attractive inducements for manufacturers.

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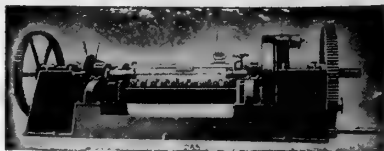
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Veneer Machinery

THE "MERIT" LINE of Veneer Cutting, Dimensioning and Drying Machinery is designed first, for veneer mills cutting high grade furniture and commercial veneer from expensive timber, and second, for basket, crate, box and barrel factories using cheaper veneer cut from the less expensive woods.



Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.

EDGINGS

Ontario

The National Furniture Company, Limited, of Berlin, Ont., has secured a license to carry on business, as furniture manufacturers, in the province of British Columbia. The provincial office of the company is at 837 Hastings Street, Vancouver, B.C.

The Sims Lumber Company, Sault Ste. Marie, Ont., who lost their mill by fire early last fall report that they do not intend to rebuild this season. They find that they can buy their stocks all manufactured much cheaper than they could manufacture them themselves.

The Goderich Milling & Lumber Company, Goderich, Ont., will soon commence work upon the erection of a planing mill. They are at present negotiating with the town council for tax exemption. The building will be one storey, 200 x 60 ft., of concrete and brick construction.

M. D. Seaman & Son, Sauble Falls, Ont., report that the timber on their limits is almost finished and they will soon be closing their mill. They intend to go into the manufacturing of sand lime brick. They report that if they have good sleighing this winter they may take out a very small stock of logs.

The Wood Mosaic Company, Inc., New Albany, Ind., report that they have been delayed in their plans for rebuilding the plants which they recently lost at Louisville and New Albany by fire. It will therefore be February or March before they will commence operations upon their proposed plant at Stratford, Ont.

The Lakes Timber Company, Limited, has been incorporated with a capital of \$50,000, with head office at Fort Frances, Ont., to carry on business as lumbermen. The provisional directors are: W. J. Law, auditor, and A. A. D. Rahn, lumberman, of Minneapolis, U.S.A.; O. Herman Diercks, lumberman, Rainy River, Ont.; A. B. Colburn, lumberman, of International Falls, Minn., U.S.A.; and W. F. Zauke, accountant, of Spooner, Minn., U.S.A.

Tenders are being received by W. H. Hearst, Minister of Lands, Forests & Mines, Parliament Buildings, Toronto, for the right to cut blown down and standing timber on McGregor Island, Georgian Bay. Parties making tenders are required to state the amount they are prepared to pay per thousand feet board measure in addition to the Crown dues of \$2 per thousand feet B.M. Also the rate they are prepared to pay per tie for any timber made into railway ties, in addition to the Crown dues of 5c each. The blown down timber is to be cut and removed by the 1st of July next. The green standing timber to be removed by the 30th day of April, 1916.

A despatch from Port Arthur, Ont., states that Mr. J. P. Bertrand of that place is organizing a new company under the name of the Bertrand-Lockhart Lumber Company and has applied for a charter. The provisional directors are A. G. Seaman, lumberman; W. Marrigan, director; J. H. McLennan, lumberman; H. A. McKibbin, financial agent, and J. P. Bertrand, lumberman. The company intend to erect buildings and make improvements to the yard at the corner of Hesther and Ontario Streets. Arrangements are also being made for establishing a yard in West Fort William. The company will do a retail and wholesale lumber business and will operate a small planing mill.

A lot of valuable timber and pulp wood land operated by the MacLaren Lumber Company, of Buckingham, and others, was involved in the transfer recently announced of the Thirty-One Mile Lake watershed in Quebec and an area of 150 square miles surrounding it from the Quebec Government to the city of Ottawa. Ottawa is purchasing it in connection with its scheme for obtaining pure water from Thirty-One Mile Lake and the others in its chain. It has obtained the land at a nominal price from the Quebec Legislature, but the latter body has retained the timber rights. Lumbermen and paper mill owners will be able to carry on their operations throughout the watershed as usual, though not in such a way as to cause pollution of the waters therein.

The Canon Lake Lumber Company, Limited, which was recently incorporated, has its head office at 734 Somerset Block, Winnipeg, Man. The company has a license to carry on business in the province of Ontario. Its capitalization is \$100,000. The president and manager is Mr. Porter P. Elliott, Winnipeg, and the secretary-treasurer is Mr. W. L. McIntosh, Winnipeg. The company's mill is situated on the main line of the Grand Trunk Pacific, 160 miles east of Winnipeg in the province of Ontario at McIntosh Station. They propose to carry on the manufacture of lumber, ties, piling, etc., and have contracts with the Grand Trunk Pacific, for ties, piling, bridge timber, etc. The company is shipping lumber at present into the Minneapolis market. Mr. Porter P. Elliott is still carrying on his timber and tie business as formerly under the name of P. P. Elliott.

Eastern Canada

Edgar Caron & Cie, sash and door manufacturers, Montreal, P.Q., have been registered.

The MacArthur Hee Company, Limited, have sold out their woodworking factory at Stellarton, N.S.

S. E. Desmarais & Company, Richmond, P.Q., recently lost his saw and grist mill by fire. No insurance was carried.

Dawson & Brothers, lumber manufacturers, Newport, P.Q., have been registered. The members are A. Dawson and M. L. Dawson.

The St. George Pulp and Paper Company, South Street, St. George, N.B., are considering plans for enlarging their pulp mill and may also erect a paper mill.

The Papineauville Lumber Company, Papineauville, P.Q., have decided to erect a mill for the manufacture of hardwood veneers for cooperage and cheese boxes.

Under the winding-up of the Wotton Chair and Toy Manufacture, Limited, Wotton, P.Q., the liquidators are selling the property, including a saw mill and machinery, by tender.

Larue & Trudel, 126 St. Peter Street, Quebec, P.Q., have been receiving tenders until January 15th for the purchase of license 110, Callieres South,

17 square miles, and license 111, Callieres North, 28½ square miles, together with a sawmill equipped with machinery and 132 acres of freehold land at Port aux Quilles, P.Q.

Mr. John H. Crandall, of Moncton, N.B., has sold his mill and lumber lands at Notre Dame, Kent County, to Mr. W. D. Gunter of Fredericton. Mr. Crandall will continue operations at Stilesville.

The Davison Lumber Company, of Bridgewater, N.S., is building a tramway by which lumber from its upper mill will be carried across the river and placed on cars for shipment. The company is making extensive improvements to facilitate the shipment of lumber.

Mr. Chipman McFarlane, of Salisbury, N.B., has resumed lumbering operations at the head of the Cocagne river, parish of Moncton. Sawn lumber is being hauled from his mill to Catamount Siding, on the I. C. R. Mr. McFarlane is lumbering this winter on an extensive scale.

The Partington Pulp and Paper Company have considerably enlarged their plant during the past year, and are now completing a new warehouse and a conveyor to carry the pulp from the mill to the warehouse, beside the railway siding which they have also had constructed for their use.

A syndicate of English, French and Canadian capitalists, with Capt. B. A. Scott at its head, is reported to be working on a proposition for establishing a large pulp and paper plant on the Saguenay River, in Quebec, and developing water power on the Grand Discharge Rapids. It is said that the development will yield 350,000 h.p. and that over \$4,000,000 will be spent on power plant, dam and pulp and paper mills.

In a despatch from Antigonish, N.B., it is stated that the Colonial Lumber Company of that place has completed the equipment of a plant for the manufacture of hardwood flooring, veneering, wainscoting, etc. They have timber areas in Antigonish and Guysboro counties that will assure a supply of 4,000,000 feet annually. The company will commence operations in the early spring. The plant represents an investment of over \$200,000.

The Grand Falls Company, Limited, will begin work very soon upon the erection of large pulp and paper mills at Grand Falls, N.B., on the St. John River, where immense power can be developed, and where it is proposed by this company to build up a very extensive industry. It will be possible to develop electric power at Grand Falls and transmit it long distances to towns and villages along the river. Sir William Van Horne is associated with this enterprise. The proposal also includes a power development of about 80,000 h.p. The cost of the pulp and paper mills will be about \$2,500,000 and the whole undertaking is estimated to involve about \$8,000,000.

Western Canada

Fire recently destroyed the plant of the Lee Lumber Company, at Wigwam, near Revelstoke, B.C. The loss was \$30,000.

Ten thousand dollars' damage was done recently when the dry kilns of the Lulu Island Shingle Mills, containing a full load, were destroyed by fire.

Jacob Kaufman, Berlin, Ont., states that his cut this winter will be about the same as last winter, viz., 125,000 feet of logs, principally hemlock, with only a few thousand feet of hard wood.

Harry C. Moore, Blairmore, Sask., is looking into the feasibility of establishing a wood distillation plant at Vernon, B.C. He has also been considering a similar plant to be established at Cranbrook, B.C.

M. M. Boyd, Bobcaygeon, Ont., who has large timber holdings on Vancouver Island, B.C., will build a mill to operate upon them. He is as yet undecided whether to build on the Island or Burrard Inlet, since he owns water frontage there.

The Rat Portage Lumber Company has established a logging camp at Ford Harbor, B.C., and will put about 1,000,000 feet of timber a month into the water. The Dempsey Logging Company, Limited has also opened a new camp at Canish Bay, Valdez Island.

P. Welch, 325 Howe Street, Vancouver, B.C., has completed plans for the erection of a sawmill with a daily capacity of 50,000 feet to be erected at Chemainus, B.C. The machinery has been purchased. The engineers are J. B. Wier & Company, 737 Pacific Street, Vancouver.

Timber berths No. 554 and No. 557, located near Pitt Lake, B.C., were auctioned off at the government timber office, New Westminster, recently. The former was bought by A. Barnett, Renfrew, Ont., for \$7,570, the area being 2,428 acres; the latter brought \$1,700, it being 753 acres in extent.

The Empire Lumber Company, which owns extensive timber lands in the neighborhood of Cowichan Lake, Vancouver Island, is about to erect a tide-water mill at Crofton, B.C. This concern is a constituent company of the American Finance & Security Company of New York City. W. C. Marsh is president, C. C. Young is vice-president and will be the resident manager. The capital stock of the company is \$7,000,000, and the timber purchased a few years ago from the Canadian Pacific railroad comprises part of the E. & N. railway grant. It is about 100,000 acres in extent.

The British Canadian Lumber Corporation has organized a bond issue of \$3,500,000, secured by an 8 per cent. note issue for three years to the amount of \$3,600,000. The directors asked for a minimum subscription of \$1,000,000, and this was over-subscribed by the shareholders. The company paid \$700,000 on timber limit purchases November 15, and will pay another \$500,000 January 1. With the money available, all liabilities may be paid off, and a working balance of \$700,000 left. This concern has a large mill at Coal Harbor in Vancouver, a new plant at New Westminster, and a mill on the Little Slokan River, Kootenay.

The Kootenay Mills, Limited, head office Moose Jaw, Sask., has been formed to take over the property of the W. E. Cooke Lumber Company, including a mill and a sash and door factory at Kaslo and 5,400 acres of limits in the Duncan River and Lardo River district. J. Wright Sifton, Moose Jaw, president of the Executors and Administrators' Trust Company, is president of the new company and the secretary is Mr. R. H. Fulton, of Moose Jaw, general manager of the Bank of Saskatchewan. The new company will rebuild the Cooke mill at Kaslo and install modern machinery. The old mill will be used to cut the lumber for the new one. Work will commence, it is reported, about the end of January. When the Cooke mill was formerly operating there were two other mills on Kootenay Lake, the Watts mill at Proctor, and the Yale-Columbia mill at Nelson. These two were destroyed by fire.

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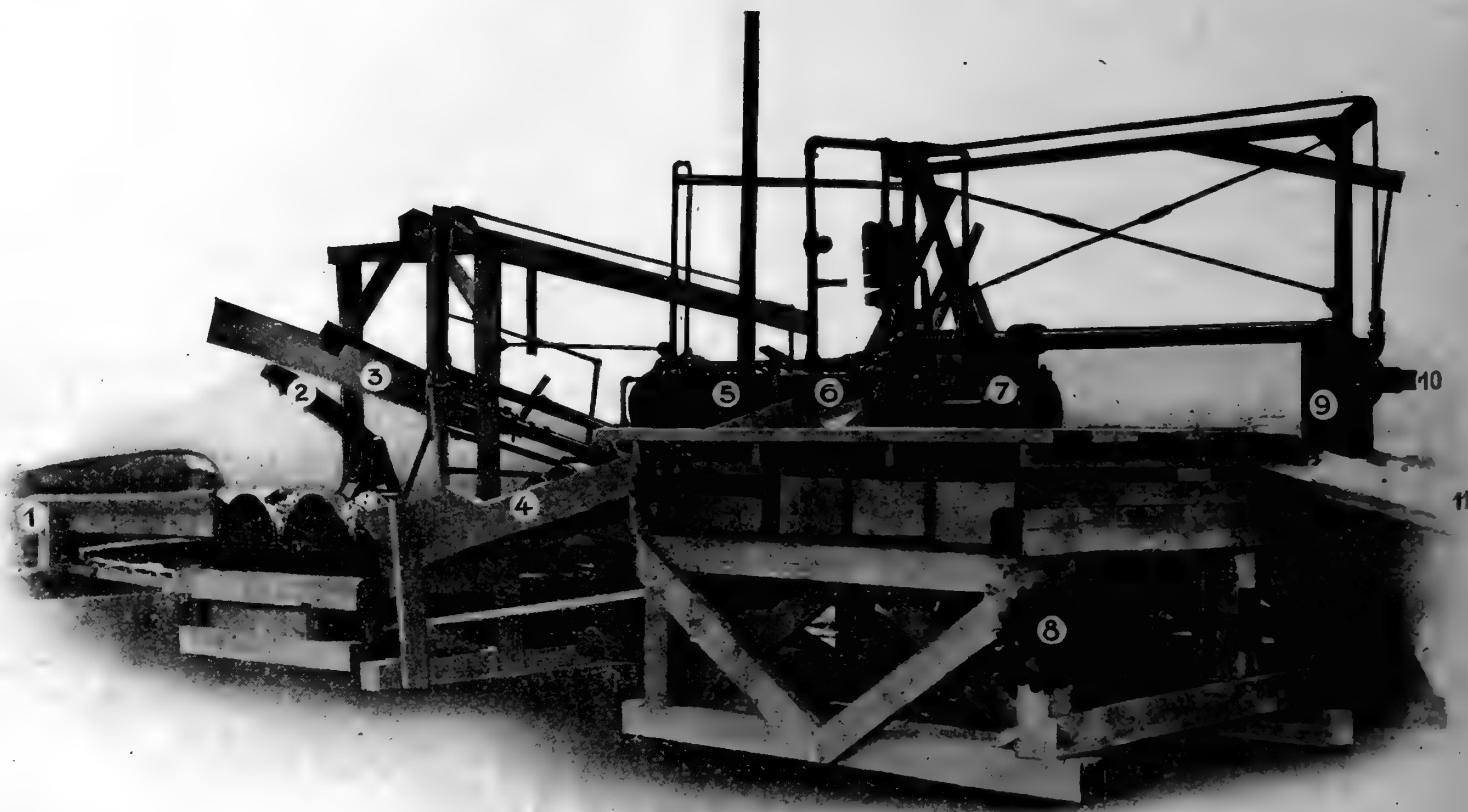
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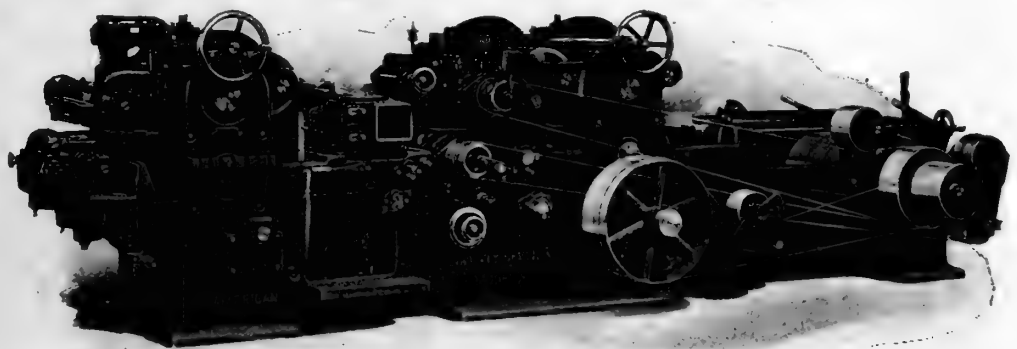
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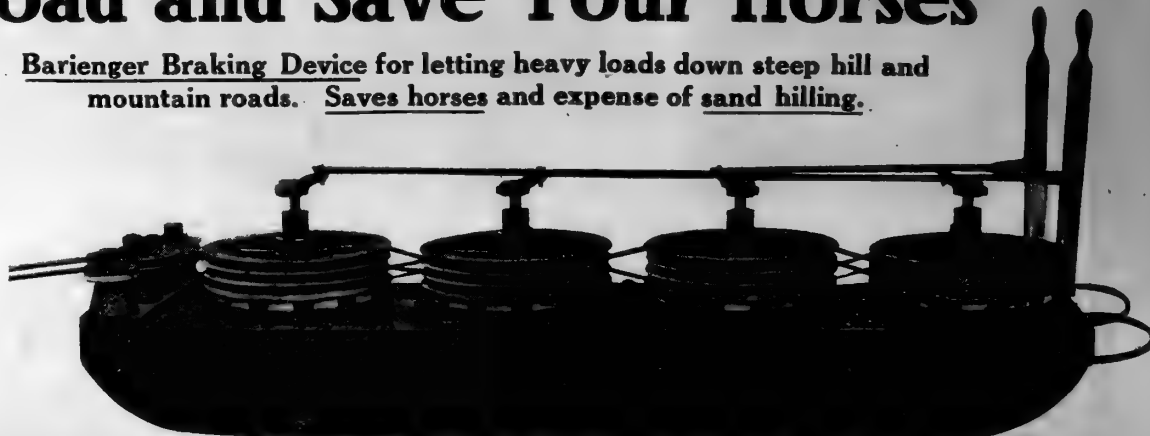
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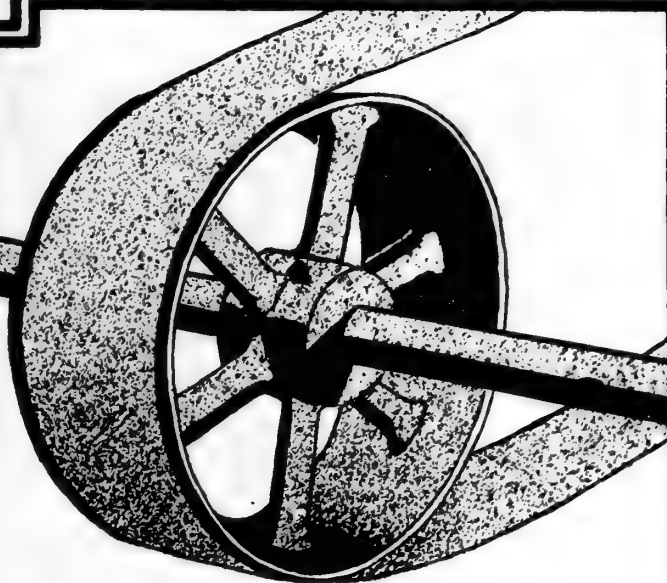
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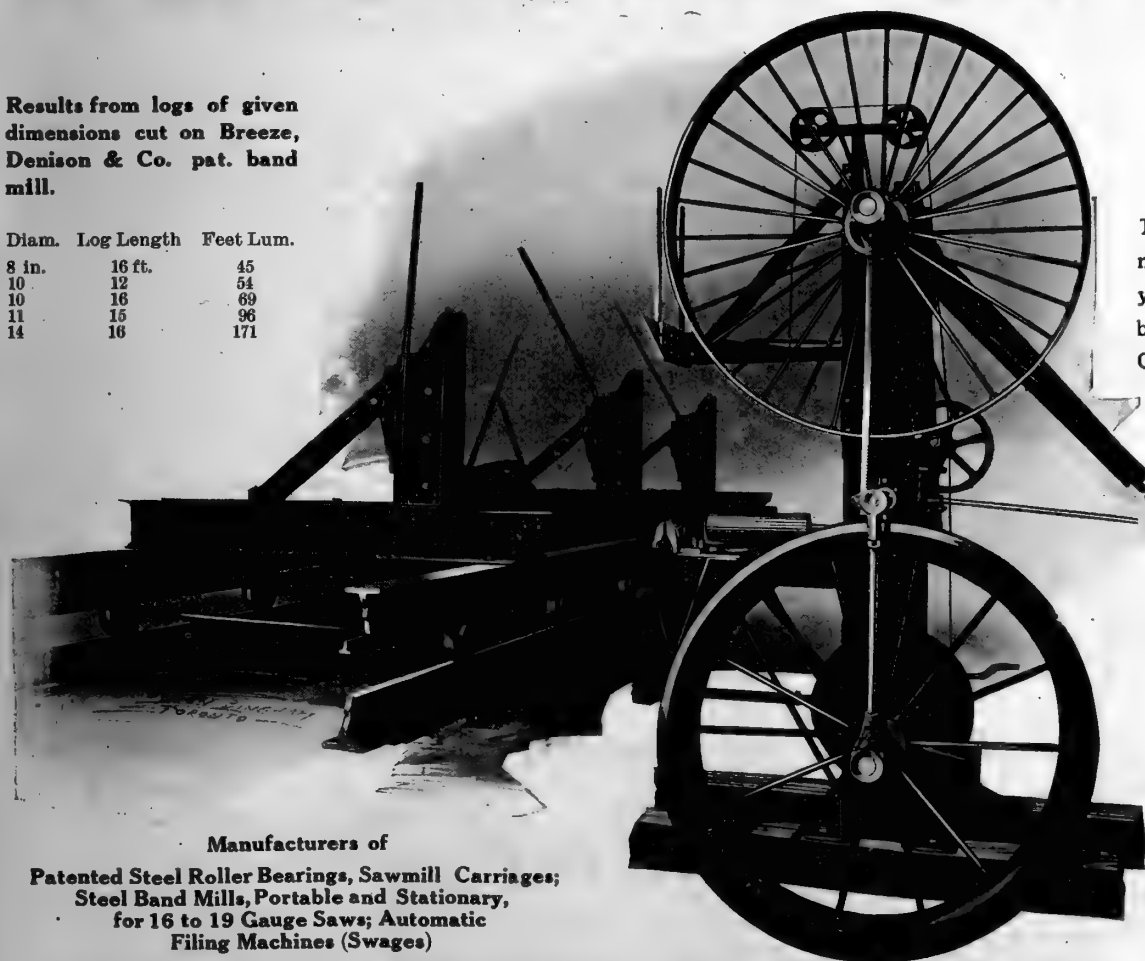
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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

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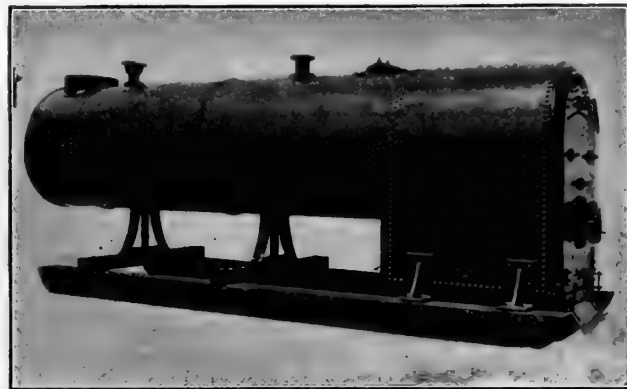
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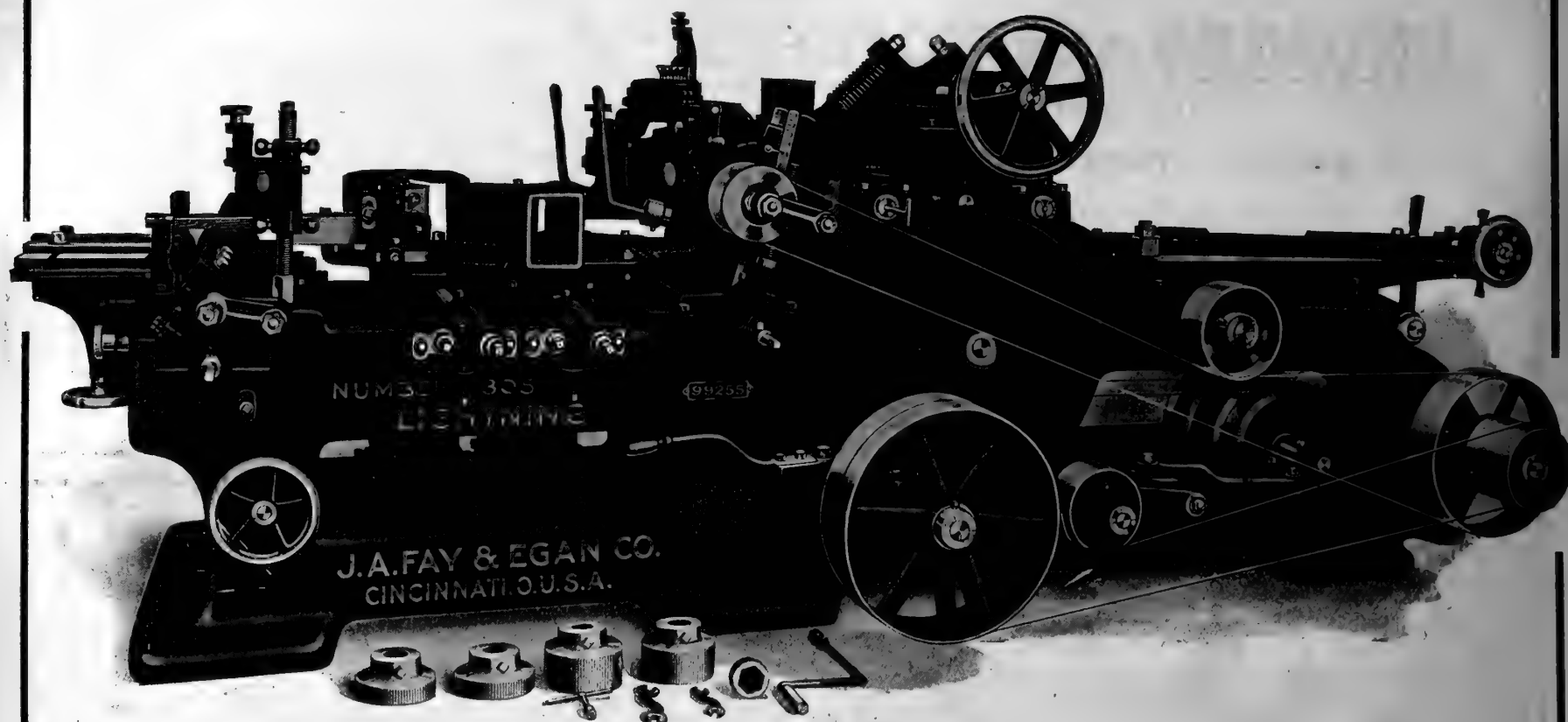


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465-485 W. Front St., Cincinnati, Ohio, U. S. A.

Potato Scale Boiler Cleanser



This compound is a deadly enemy to scale and not only removes scale from tubes but if used regularly in the feed water prevents the formation of scale.

It contains no ingredients that can in any way harm metal.

Potato scale is sold under a guarantee—thousands are using it and are perfectly satisfied. Write for sample keg.

C. C. Snowdon

Box 1384

Calgary, Alta.



**Not altogether what we
say but what users say**

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs,
in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.



HERE IS A
MASS OF THE
ALOXITE
CRYSTAL
AS IT COMES
FROM THE
ELECTRIC
FURNACE

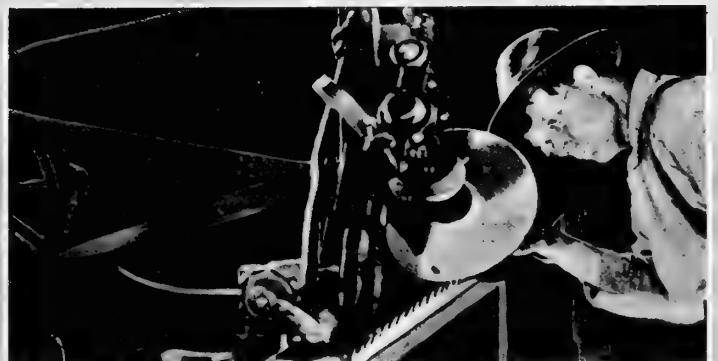
EVERY crystal in this mass is hard, sharp, tough—every crystal uniform in its cutting qualities. These crystals are crushed to just the size required, are carefully mixed with certain bonding materials, and made into the fast, clean, cool, cutting

ALOXITE SAW GUMMING WHEELS

The crystals do the cutting.—The wheels cut without drawing the temper or case-hardening the saw.—They show long life, hold their shape, and every wheel of a given grit, or grade, or shape can be positively duplicated so perfected is the Carborundum method of wheel making.

ALOXITE IS THE WHEEL FOR STEEL

A Trial Wheel Will Prove



The Carborundum Company

WORKS:

Niagara Falls, N. Y.

Reisholz Düsseldorf, Ger.

Manchester, Eng.

STORES:

New York Chicago Boston Pittsburgh Philadelphia
Cleveland Cincinnati Milwaukee Grand Rapids

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	\$55 00	57 00
1 1/2 inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1 1/2-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	45 00
5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	36 00	36 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
4/4 No. 3 cuts	28 00	28 00
5/4 and 6/4 No. 3 cuts	32 00	32 00
8/4 No. 3 cuts	33 00	33 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
1 x 10 and 12 mill cut stocks	24 00	24 00
1-in. mill cut sidings	22 00	22 00
5/4 and 6/4 x 4 m.r., m.c. out.	26 00	26 00
5/4 and 6/4 x 5 m.r., m.c. out.	26 00	26 00
5/4 and 6/4 x 6 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out.	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out.	36 00	36 00
2 x 10 common	28 00	28 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1 1/2-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill cuts	20 00	20 00
Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16-ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 00	24 00
2x4 to 12-in., 12 and 14 ft.	24 00	24 00
2x4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 20 ft.	28 00	28 00
2 x 4 to 12-in., 22 ft.	27 00	27 00
2 x 4 to 12 in., 18 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00	34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x18, 18x18, 20x20, up to 32 ft.	34 50	34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00	35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 50	35 50
10x20, up to 32 ft.	36 00	36 00
6x18, 8x18, up to 32 ft.	36 50	36 50
6x20, 8x20, up to 32 ft.	37 50	37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	44 50
No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1 1/2, 1 1/2 and 2-in. Fir rough	47 00	47 00
1 1/2-in. No. 1 4-ft. pine lath	4 50	4 50
1 1/2-in. No. 2 4-ft. lath	4 20	4 20
1 1/2-in. 32-in. pine	1 80	1 80
1 1/2-in. No. 1 4-ft. hemlock lath	3 75	3 75
1 1/2-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XX B. C. cedar shingles	2 25	2 25
XXX 6 butts to 2-in.	3 20	3 20
XXXX 6 to 23-16-in.	3 40	3 40
XXXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1 1/2 and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1, com. and bet., 4/4	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4	35 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00
Soft elm, No. 2 and 3, common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00
Rock elm, No. 2 com. and bet. 6/4 and	

8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/4	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00
Red oak, plain 1st and 2nds, 4/4	62 50
Red oak, plain 1sts and 2nds, 12/4	
and 16/4	75 00
White oak, plain, 1st and 2nds, 4/4	62 50
White oak, plain, 1sts and 2nds, 1 1/2	
and 2-in.	70 00
White oak, plain, 1sts and 2nds, 12/4	
and 16/4	75 00
White oak, 1/4 cut, 1sts and 2nds, 4/4	85 00
White oak, 1/4 cut, 5/4 and 6/4, 1sts	
and 2nds	88 00
White oak, 1/4 cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:	
1-in. x 7-in. and up	\$53 00 55 00
1 1/2-in. & 1 1/2-in. x 8-in. & up	56 00 60 00
2-in. x 7-in. and up	58 00 65 00
No. 2 cuts 2 x 8-in. and up	40 00 45 00
Pine good strips:	
1-in.	40 00 42 00
1 1/2-in. and 1 1/2-in.	52 00 54 00
2-in.	52 00 55 00
Pine good shorts:	
1-in. x 7-in. and up	42 00 44 00
1-in. x 4-in. to 6-in.	32 00 35 00
1 1/2-in. and 1 1/2-in.	50 00 54 00
2-in.	52 00 54 00
7-in. to 9-in. A sidings	25 00 27 00
Pine, No. 1 dressing sidings	30 00 33 00
Pine, No. 1 dressing strips	29 00 30 00
Pine, No. 1 dressing shorts	22 00 26 00
Pine, 1-in. x 4-in. s.c. strips	22 00 23 00
Pine, 1-in. x 5-in. s.c. strips	24 00 25 00
Pine, 1-in. x 6-in. s.c. strips	23 00 24 00
Pine, 1-in. x 7-in. s.c. strips	23 00 24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00 27 00
Pine, 1-in. x 10-in. M.R.	28 00 29 00
Pine, s.c. sidings, 1 1/2 and 2-in.	30 00 33 00
Pine, s.c. strips 1-in.	20 00 22 00
1 1/2, 1 1/2 and 2-in.	24 00 26 00
Pine, s.c. shorts, 1 x 4 to 6 in	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00 22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00 22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00 25 00
Pine, box boards:	
1"x4" and up 6'-11'	16 00 18 00
1"x3" to 6", 12'-16'	17 00 19 00
Pine mill cuts, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00 19 00
Pine mill cuts stock 1 x 12	21 00 22 00
Mill cut shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00 18 00
O. cuts r & w p	14 00 16 00
Red pine, log run:	
mill cuts out, 1-in.	18 00 20 00
mill cuts out, 1 1/2-in.	19 00 21 00
mill cuts out, 1 1/2-in.	19 00 21 00
mill cuts out, 2-in.	22 00 24 00
Mill run Spruce:	
1"x4" and up, 6'-11'	17 00 18 00
1"x4" and up, 12'-16'	18 00 20 00
1"x9"-10" and up, 12'-16'	22 00 24 00
1 1/2"x7"-8" and up, 12'-16'	22 00 24 00
1 1/2"x10" and up, 12'-16'	22 00 24 00
1 1/2" & 2"x12" and up, 12'-16'	25 00 26 00
Spruce 1-in. clear (fine dressing and B)	25 00 27 00
Hemlock 1-in. cull	13 00 15 00
Hemlock 1-in. log run	17 00 20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00 23 00
Tamarac	19 00 20 00
Basswood log run, dead cuts out	22 00 24 00
Basswood log run mill cuts out	23 00 26 00
Birch log run	19 00 22 00
Soft elm, common and better, 1, 1 1/2, 2-in.	20 00 24 00
Ash, black, log run	25 00 28 00
1 x 10 No. 1 barn	33 00 36 00
1 x 10 No. 2 barn	23 00 26 00
1 x 8 and 9 No. 2 barn	22 00 23 00
Lath per M:	
No. 1 white pine 1 1/2-in. x 4-ft.	4 00 4 35
No. 2 White Pine	3 80 3 95
Mill run white pine	4 00 4 25
Spruce, mill run 1 1/2-in.	3 00 3 25
Red pine mill run	3 25 3 60
Hemlock, mill run	2 75 3 00
32-in. lath	1 80 2 00
Pine Shingles	
xxxx, 18-in.	3 00 3 50
Clear butt 18-in.	2 50 3 25
xx	1 75
White Cedar Shingles:	
xxxx, 18-in.	3 75 4 25
Clear butt, 18-in.	3 00 3 50
18-in. xx	2 00
Spruce logs (pulp)	13 00 15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70
Oak—Michigan and Ohio	
By the dram, according to average and quality	65 72
Elm	
By the dram, according to average and quality, 40 to 45 feet	80 90

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 40 40

Birch

14 inch, per cu. ft. 20 22
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1 1/2 and 1 1/2 in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1 1/2 in., 8-in. and up wide 55 00
1 1/2 in., 8-in. and up wide 57 00
2 in., 8-in. and up wide 60 00
2 1/2 and 3 and 8-in. and up wide 75 00
4 in., 8-in. and up wide 85 00

No. 2 Cuts

1 in., 6-in. and up wide 31 00
1 1/2 in., 6-in. and up wide 42 00
1 1/2 in., 6-in. and up wide 44 00
2-in., 6-in. and up wide 47 00
2 1/2, 3 and 4 in., 6-in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide 24 00
1 1/2 and 1 1/2 in., 6-in. and up wide 33 00
2-in., 6-in. and up wide 33 00
2 1/2, 3 and 4-in., 6-in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 13 in. and up 34 00
1 1/2, 1 1/2 and 2-in. 30 00

No. 1 Barn

1 inch 31 00 45 00
1 1/2, 1 1/2 and 2-in. 36 00 45 00
2 1/2 and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1 1/2, 1 1/2 and 2-in. 30 00 36 00
2 1/2 and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1 1/2, 1 1/2, 2-in. 20 00 25 00

Box

No. 1, 1, 1 1/2, 1 1/2, 2-in. 22 00 25 00
No. 2, 1 1/2, 1 1/2, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1 1/2, 1 1/2 and 2-in. 20 00
No. 2 17 00 18 00

Lath

No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimensions, Rough or S. 1 S. and 1 E.			
6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4	15 00	18 00	22 00 20 00
2 x 6	18 00	18 00	22 00 20 00
2 x 8	18 00	18 50	22 00 20 00
2 x 10	19 00	19 50	22 50 21 00
2 x 12	19 00	20 00	24 50 22 50

PINE, SPRUCE, TAMARAC & LARCH

Mountain Stock

Dimensions

2 x 4-12	20 50
2 x 4-8-14-16	20 50
2 x 4-10-18-20	22 50

2 x 8, 8 to 16 20 00
2 x 8, 8 to 16 20 50

No. 1 Common Boards

4 inch	\$18 50
6 inch	21 00
8 inch	23 00
10 inch	23 00
12 inch	23 00

Flooring

4 or 6 inch No. 1	\$33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	24 50

Shiplap—Finished</

Tested in the Laboratory of Time

For scores of years Disston Saws have been tried out under all sorts of conditions. They have successfully stood up to all natural requirements, and passed through many an ordeal for which they were never intended.

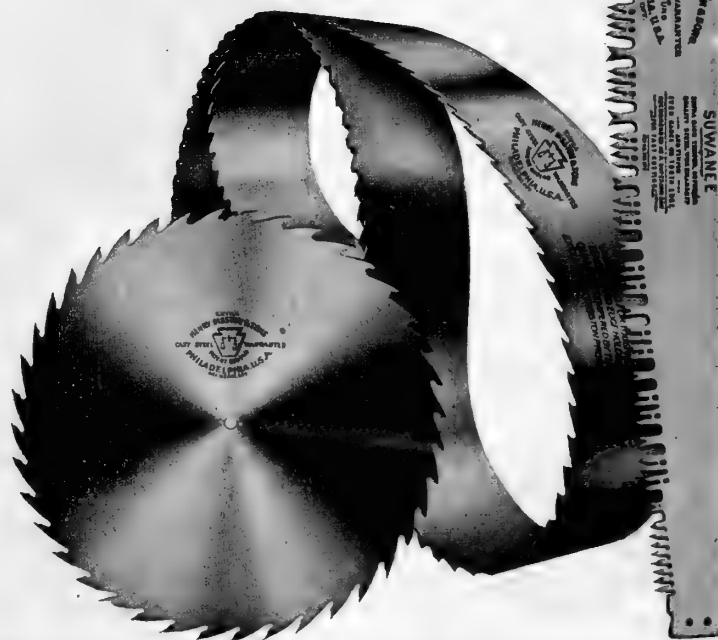
This has inevitably led to increasing demand. Today they are used in a majority of the lumber mills and camps of the world.

DISSTON SAWS

are distinguished for the highest grade of material and workmanship—which includes hardening and tempering, tensioning, etc.—that is the natural result of generations of saw-makers working with similar ideals, under the guidance of men who have the accumulated experience of nearly three-quarters of a century to draw upon. The facilities and experience of this plant make possible the production of these unequalled saws—the excellence of the saws have made this plant the greatest saw works in the world.

Have you a copy of our Handbook? Free for the asking.

"Depend
on
DISSTON"



HENRY DISSTON & SONS LIMITED

Keystone Saw, Tool, Steel and File Works
TORONTO, CANADA
Branch at Vancouver, B. C.



Reg. U. S. Pat. Off.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	38 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24
RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22
SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22
BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23
PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27
ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 in.	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00		
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00		

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00	1 1/2-in. spruce laths	4 40
Barn Boards, No. 1, 1 x 12	48 00	50 00	1 1/2-in. spruce laths	3 90
No. 1, 1 x 10	38 00		New Brunswick Cedar Shingles	
No. 1, 1 x 8	37 00		Extras	3 55 3 75
No. 2, 1 x 12	40 00	42 00	Clears	3 25 3 40
No. 2, 1 x 10	35 00	36 00	Second clears	2 75 3 00
No. 2, 1 x 8	34 00	35 00	Clear whites	2 65
No. 3, 1 x 12	32 00	33 00	Extra 1s (Clear whites out)	1 50
No. 3, 1 x 10	29 00	30 00	Extra 1s (Clear whites in)	1 00
No. 3, 1 x 8	29 00	30 00	Red Cedar Extras, 10-in. 5 butts to 2-in.	3 65
Canadian spruce boards	25 00	26 00	Red Cedar Eureka, 18-inch 5 butts to 2-in.	4 25
Spruce, 10 in. dimension	28 00		Red Cedar Perfection, 5 butts to 2 1/4	4 80
Spruce, 12 in. dimension	29 00		Washington 16-in. 5 butts to 2-in. extra red clear	3 50 3 60
Spruce, 9 in. and under dimension	26 00		The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4 c. per ft. All F.O.B. Jamestown, New York.	
Spruce, 8 in. and under dimension	25 00			
10 and 12 in. random lengths, 10 ft. and up	26 00			
2 x 3, 2 x 4, 2 x 6, 2 x 8, 2 x 10 and 3 x 4 random lengths, 10 feet and up	21 00	22 00		
All other random lengths, 7-in. and under, 10 ft. and up	21 00	21 50		
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00			
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00			

**COTTON BELTS
LEATHER BELTS
GANDY BELTS
CAMEL HAIR BELTS
BALATA BELTS
RUBBER BELTS
ROPE DRIVES**

Here is one more proof—an unbiased recommendation through the January Woodworker:

"Have had in use for fifteen months on a 5 kw. dynamo, a 5 in. three-ply cotton belt which has proved very satisfactory.

"Before putting belt to work I stuff it full of Cling-Surface and find I have a belt which handles the load in even better shape than a first-class leather belt and at just about one-third the cost.

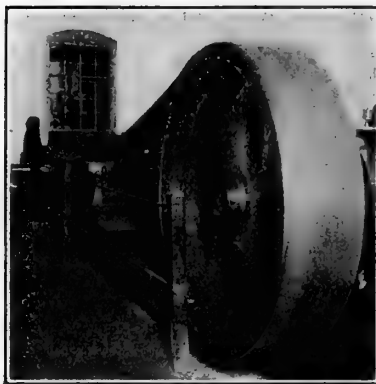
"I also use the same kind of belt and method of treating in light feed belts on various machines with perfect satisfaction."

The man who wrote the above, (name unknown to us) certainly thinks well of Cling-Surface, but so does every body who uses it.

Notice, he said, "I stuff it full of Cling-Surface." That's the proper way to treat a belt. The outside is of secondary importance. Reach the inside of the belt.

All belts are improved by Cling-Surface treatment. Even good rubber belts, as we have repeatedly proved in

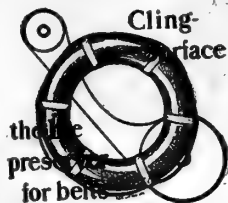
**All Need
Cling-Surface**



actual installations, always do better with this treatment properly used.

Investigate Cling-Surface personally and you will find it a real essential to efficient belt management.

Let us have a trial order and if the Cling-Surface doesn't make good the trial won't cost a cent. Ask for our literature and let us quote f.o.b. Toronto.



Cling Surface Co

1021 Niagara St Buffalo N Y

New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 61

WHY?

Pay for Bags, Sacking, Freight, Handling, Cadging on light dirty oats, when the above items of cost are the same on

**Heavy, Clean,
"National" Oats**

purchased direct from producers and shipped from our elevators in the heart of the best oat sections of the Western Provinces.

Write or wire for quotations

National Elevator Company, Limited

WINNIPEG, MANITOBA

Port Arthur, Ont.

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"AJAX" The World's Strongest Chain



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs. (See how this Chain stretched before breaking.)

Do your log loading with the "Ajax" loading chain, every link of which is guaranteed. The illustration tells a convincing story.

Manufactured only by

**Standard Chain Company
Pittsburgh, Pa.**

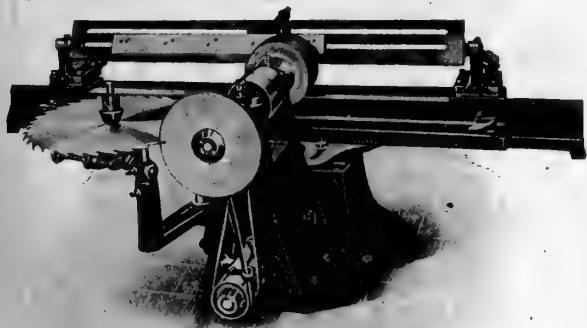
The World's Largest Chain Producers.

Montreal: Alexander Gibb, St. Nicholas Bldg.

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Automatic Knife Grinder and Saw Gummer



This combination machine will be a valuable addition to your plant and will pay for itself in a short time.

This is one of the many Automatic Knife Grinders and Saw Sharpeners manufactured by us.

Write for our complete catalog—it is yours for the asking.

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.



Dixon's Solid Belt Dressing

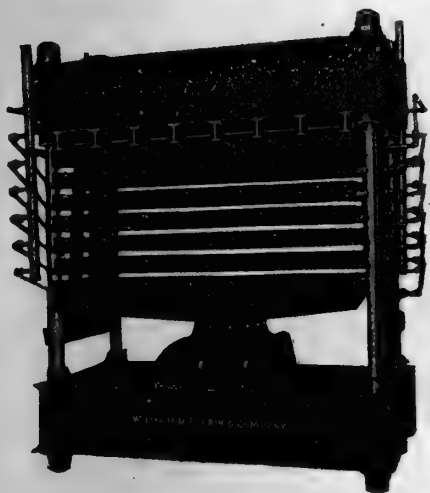
Belt slippage means loss of power and wear of Belts.

Slippage is prevented and wear minimized by the use of Dixon's Solid Belt Dressing. It is cleanly—easily applied while the belt is running—increases the adhesiveness without causing stickiness—contains no injurious elements.

Write for "The Proper Care of Belts", No. 238.

Made in JERSEY CITY, N.J. by The
Joseph Dixon Crucible Company

Established 1827



Veneer Press and Dryer

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

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TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

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Winnipeg
Harry F. Moulden & Son

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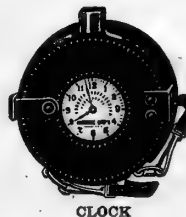
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George W. Laidlaw

HUTHER BROS. PATENT GROOVER OR DADO HEAD

For cutting any width groove from one quarter inch to 2 inches or over



Can be used on any Circular Saw Material. Will cut a perfect groove with or across the grain. This is the only Dado Head on the market that gives entire satisfaction on all classes of work. No screw adjustment. For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of wood working machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense.
HUTHER BROS., SAW MFG. CO., Inc., 1103 University Ave., ROCHESTER, N.Y., manufacturer
Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.



Watch Your Watchman

Not to keep track of him, but for the safety of your building. With

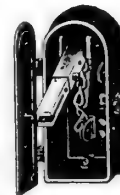
The Hardinge Watchman's Clock

you can see at a glance if your building is being properly patrolled at night.

The Hardinge System is guaranteed accurate—reliable—fool proof. Write for catalog C L and price list.

Hardinge Bros. (Inc.)

1770 Berteau Avenue
Chicago, Ill.



STATION



Griplock Riveted Chain Belt



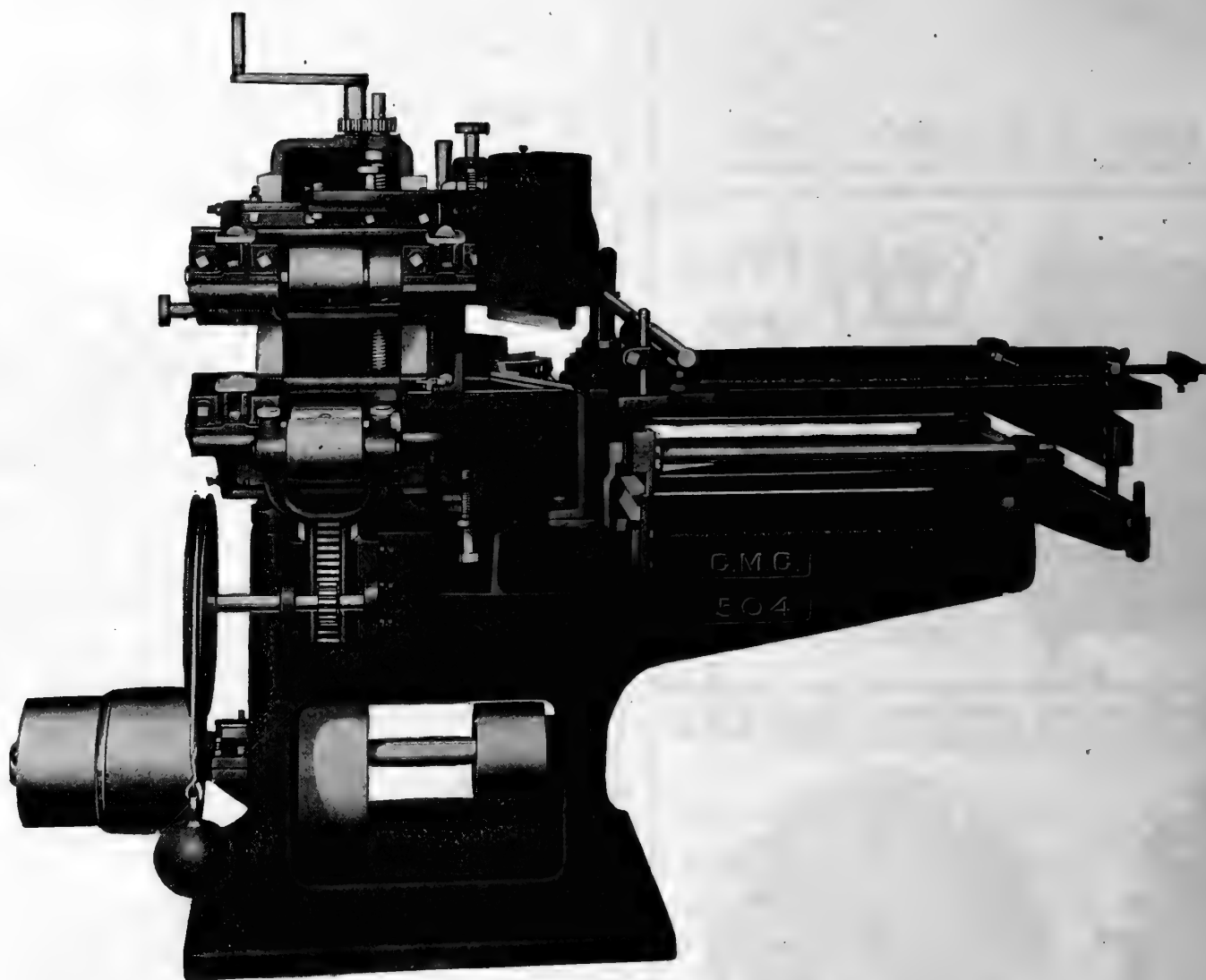
Section of Griplock Riveted

No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis., a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

We would be very glad to mail you sample links for your inspection.

Sold by **The A. M. ELLICOTT CO., Montreal, Que.**
Elevating, Conveying and Transmission of all kinds a specialty

TENONER**TENONER**

504 Tenoner with Double Copes

Your attention is directed to our new No. 504 TENONER. This machine has been on the market for a short time, in which OVER TWENTY have been sold and are giving universal satisfaction. In announcing this machine we offer a Tenoner in which every modern idea has been embodied. Our long experience with woodworking machinery has enabled us to build a Tenoner which will produce perfect work with great speed and ease of operation.

Machine can be supplied with single or double copes, or cut off saw, as desired.

Bulletin No. 504 detailing all the improvements which invite your investigation sent on request.

Canada Machinery Corporation, Limited
Galt, Ontario

Largest Builders of High Class Wood-Working Machinery in Canada



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THE best method we have for "getting acquainted" with a man is through a Leviathan Belt. When he has put that belt into use, and watched it day after day—then we know each other better; he has faith in us and our goods—especially if he compares his "Leviathan" with some other belt.

Main Belting Company

of Canada, Limited

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CANADA

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"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbings (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

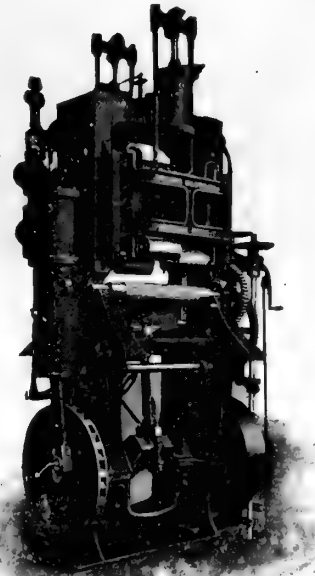
"The Gang cannot Overslab."

Wickes Brothers

410 White Building

SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.



Morgan Machine Company

ROCHESTER, N. Y.

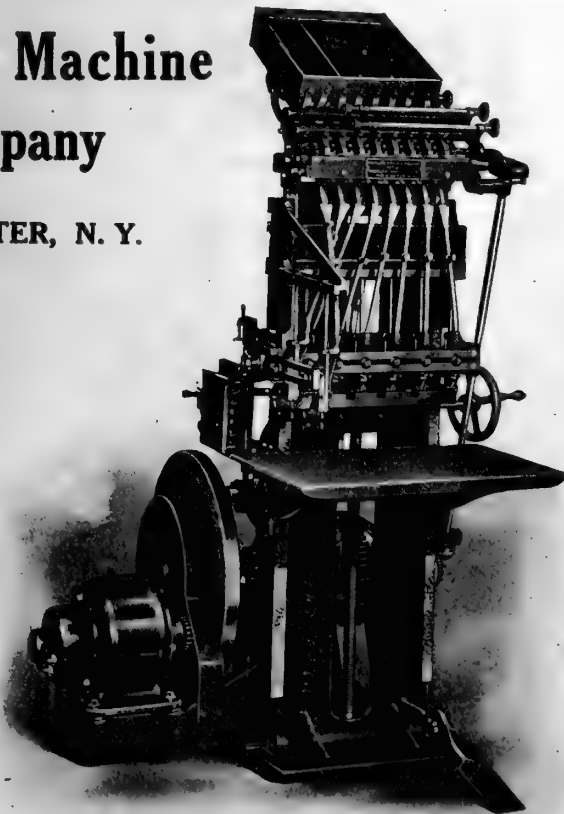
Manufacturers
of—

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Machines,

Lock Corner Box
Machinery,

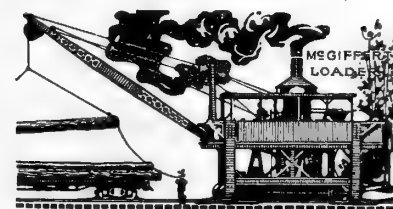
Box Board
Matchers,

Box Board
Printing
Machines.

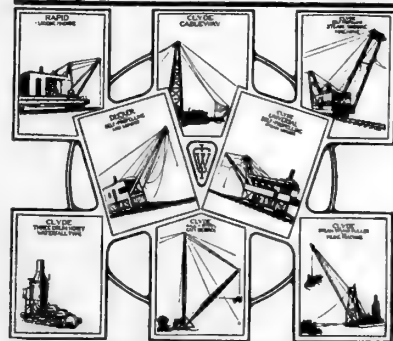


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.

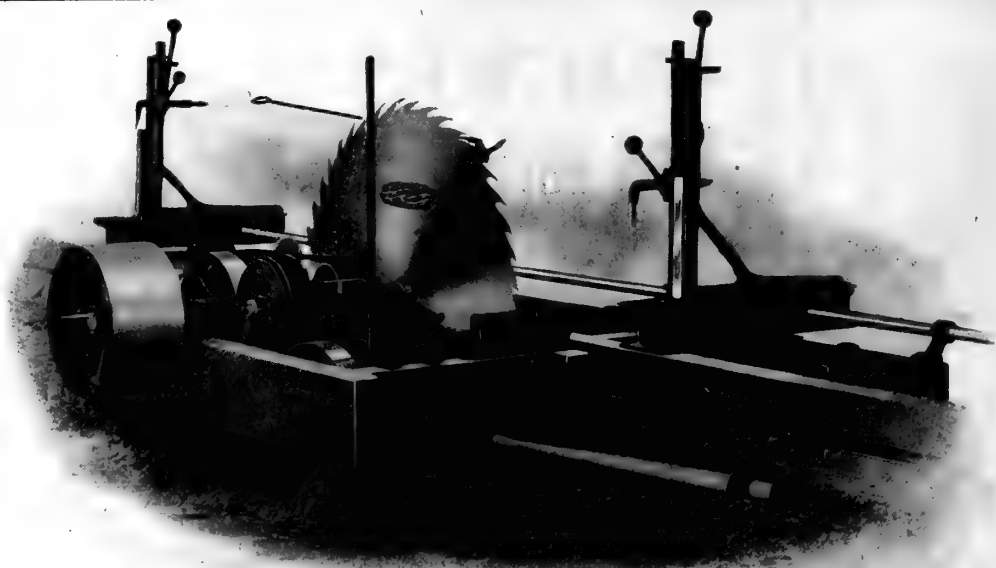


A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.



Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

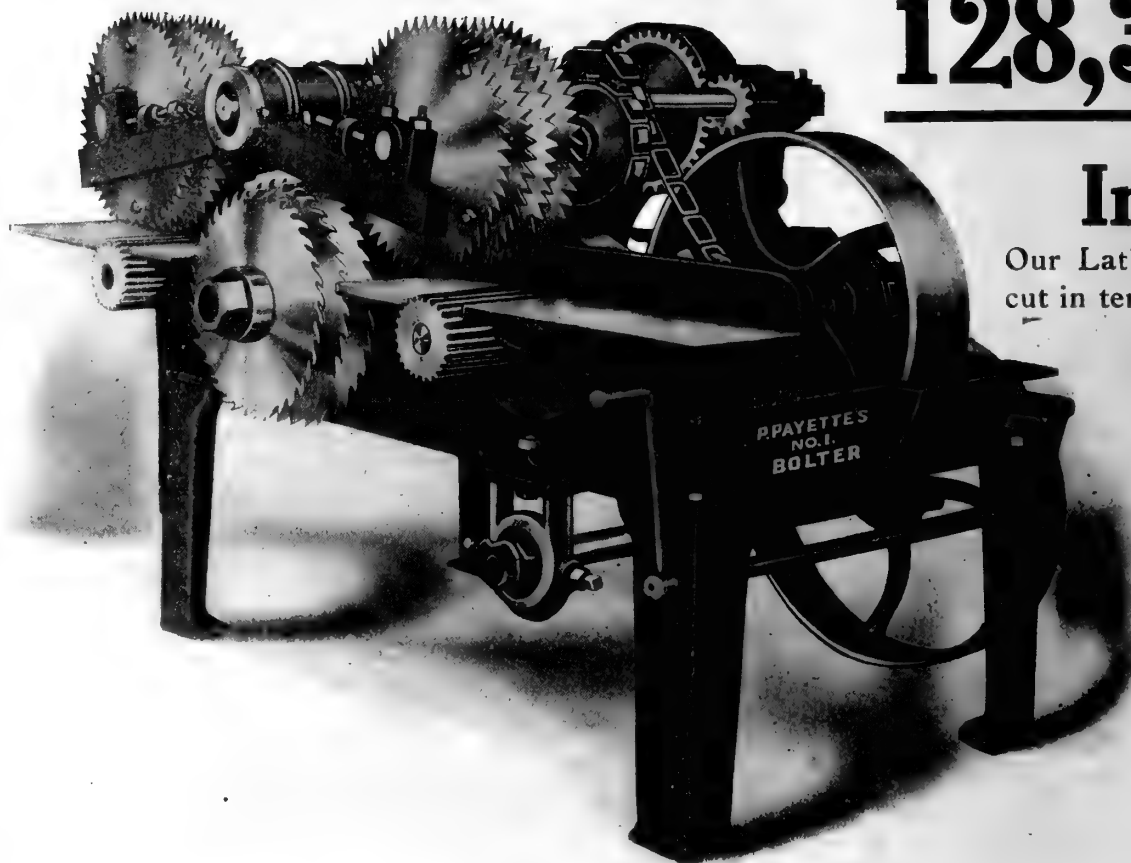
Size "S" Single Mill with 16-foot Carriage

Size Husk	3 feet by 6 feet 3 inches	Width of Carriages	33 inches
Diameter and Length Mandrel	2 3/16 by 55 inches	Trucks	7-inch wheels and 1 1/4-inch axles
Size Drive Pulley	20 by 10 inches	Length Track	32, 40, 48 or 56 feet
Feed per Revolution of Saw	0 to 3/4 inches	Style and Opening of Blocks	Cl-36 inches
Feed Belt	4-inch Gandy	Style Mill Dogs	Pony Excelsior
Largest Diameter Saw	56 inches	Style Set Works	No. 1 Single Ratchet
Length of Carriages	12, 16, 20 or 24 feet		

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes or tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C.. E. Long Mfg. Co., Orillia, Ont.



128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1 1/2 in. by 3/8 in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.

A Few of the "400" who use Payette's Lath-Machinery:

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 Victoria Harbor Lumber Co., Victoria Harbor, Ont.
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 Colonial Lumber Co., Pembroke, Ont.
 Theo. A. Burrows, Grand View, Man.
 Wm. Milne & Sons, North Bay, Ont.
 C. Beck Mfg. Co., Penetanguishene, Ont.
 Manley Chew, Esq., Midland, Ont.
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P. Payette & Company,

Engineers and Machinists

PENETANGUISENE, ONT.

THERE'S A BERLIN BAND FOR EVERY PURPOSE

On Berlin Band-sawing machines are improvements that cannot be bought elsewhere at any price.

And in the Berlin line of Band Rip and Resaws there's a machine especially adapted to whatever work you want to do.

For resawing cants or planks or slabs, or ripping any kind of stock there's a Berlin to do it at the lowest cost to you.

Equip your mill with Bands of one make, head mill to Ripsaw. Install machines of similar design with similar operating devices. Then any operator can work well with any Rip or Resaw in your mill without any "breaking in."

Each Berlin Band is adapted to certain work. The close-coupled resaw with short, stiff blade and powerful feed works will take all the cants dropped to it by two Band mills.

Low Production Cost

The Twin Horizontal with hopper feed, with its continuous cut, has a daily output of 45,000 board feet.

The Band Rip combines quick, accurate operating with fast feeds and lowers production cost of ripping molding, flooring and special stocks.

There's a Berlin Band working near you, under conditions similar to yours. See it in operation. Talk with the owner. Ask for his name and address.

This Band Saw catalog illustrates and describes the line complete.

Write for it Today

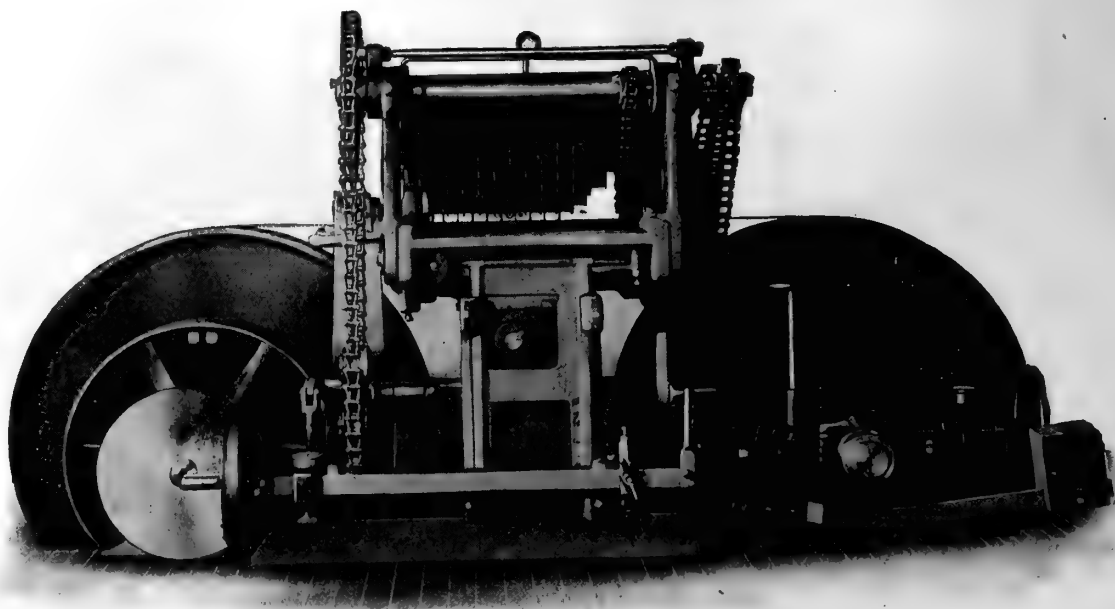
THE BERLIN MACHINE WORKS, LTD.

Hamilton, Ontario

United States Plant, Beloit, Wis.

BERLIN
BAND
SAWS

BELOIT, WIS.
U. S. A.



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

LOGGING LOCOMOTIVES



The locomotive illustrated was built for MacKenzie, Mann & Co., Contractors, Montreal, Canada, and represents the latest development in this type of locomotive.

It is suitable for logging contractors, quarries, mines and industrial service. It will haul 1,875 tons on level, and 160 tons on 3 per cent. grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

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VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Engine being operated by the Trout Creek Logging Co., Ltd.
of Trout Creek, Canada

Especially adapted
for heavy hauling
on steep grades,
sharp curves and
uneven tracks. For
logging, switching
and pulling on main
lines, mills, fur-
naces and indus-
trial purposes.

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**ECONOMY IN LOGGING OPERATIONS**

FIFTY years experience has taught us how to build logging and industrial locomotives that will give the greatest amount of power for the lowest fuel consumption.

The simple and sturdy construction of our locomotives is also a notable feature. They are easy to control and economical in repair.

Our Logging and Industrial locomotives are specially designed to meet the conditions under which they are expected to operate. *Send for Specifications.*

Canadian Locomotive Co., Limited, Kingston, Ont.



No Mountain Pass too Steep for
the Horse shod with

Red Tip Calks

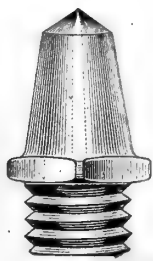
Nowhere are surefooted horses more necessary than in the dangerous mountain passes and steep slippery hills encountered daily by the lumberman.

Red Tip Horseshoe Calks

here prove their value, and their cost is but a slight premium to pay as Horse Insurance.

The horse shod with Red Tip Calked Shoes is fearless and capable and can do the work required of him without danger to life or limb.

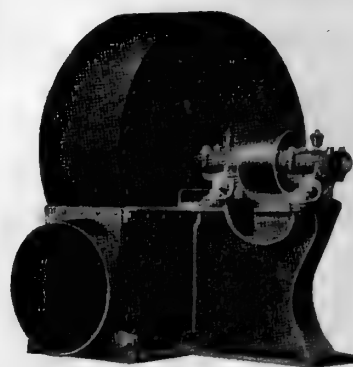
**Ask your horseshoer
or send for Booklet 4**



**The Neverslip Mfg.
Company**

Canadian Office 559 Pius IX Ave.,
Montreal

Factories { New Brunswick, N. J.
Montreal, Canada



WHY you should install the **Mahony Blower** System in your Planing Mill

Fifty per cent. higher efficiency than any other on the market to-day, uses $\frac{1}{2}$ less power, costs less to install, no cyclone required, eliminates back pressure on the fan. I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

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Modern Planing Mills

Use
**SHELDONS
EXHAUST
FANS**



See for yourself what our Exhausters will do for you in your particular plant. We guarantee our workmanship and reasonable prices.

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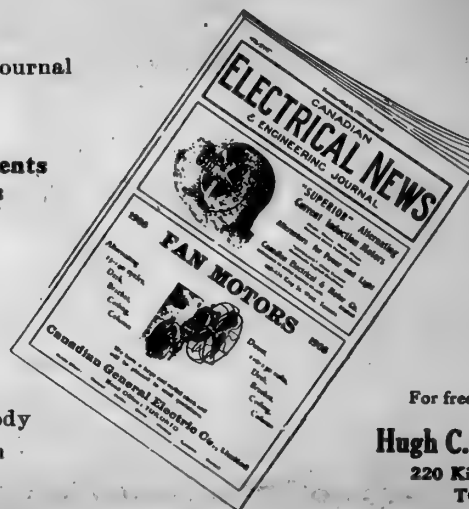
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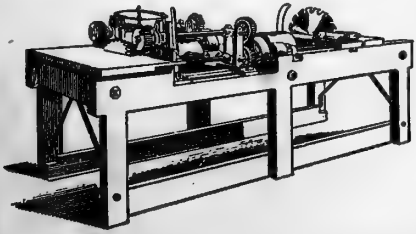
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the only Lath Machine with Self-oiling Boxes.



Write us for full particulars of this well-built
and moderate-priced Lath Mill.

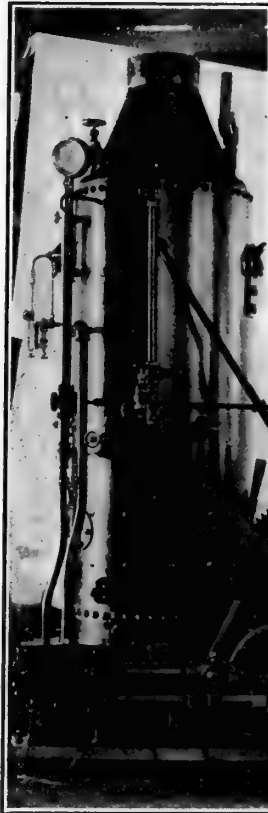
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Hoisting Engines



A strongly constructed
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with every attachment and
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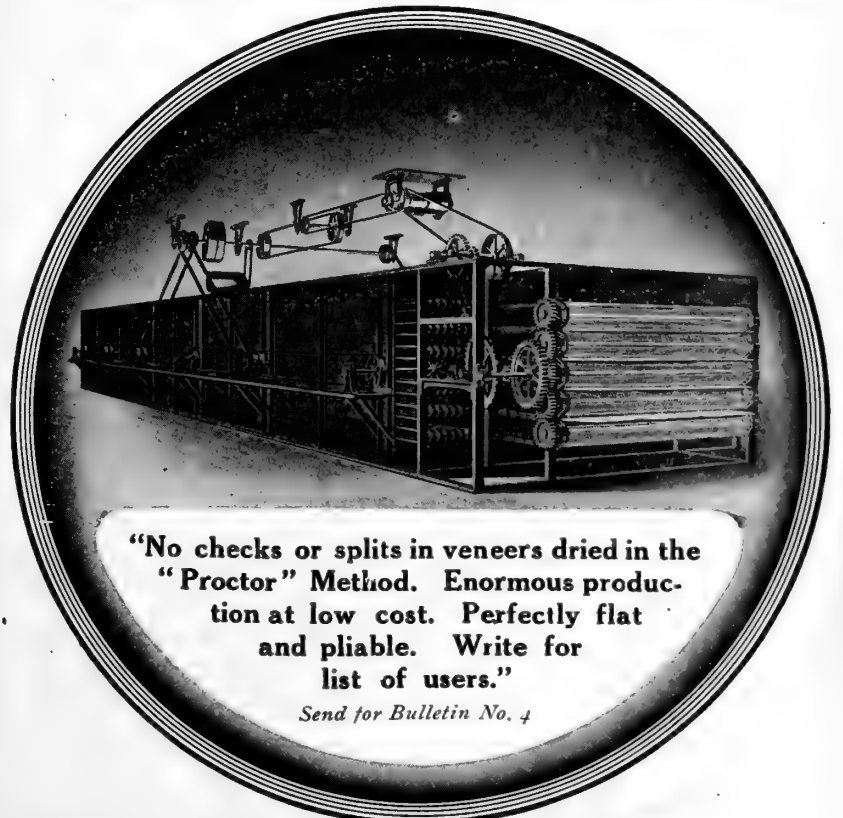
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"No checks or splits in veneers dried in the
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and pliable. Write for
list of users."

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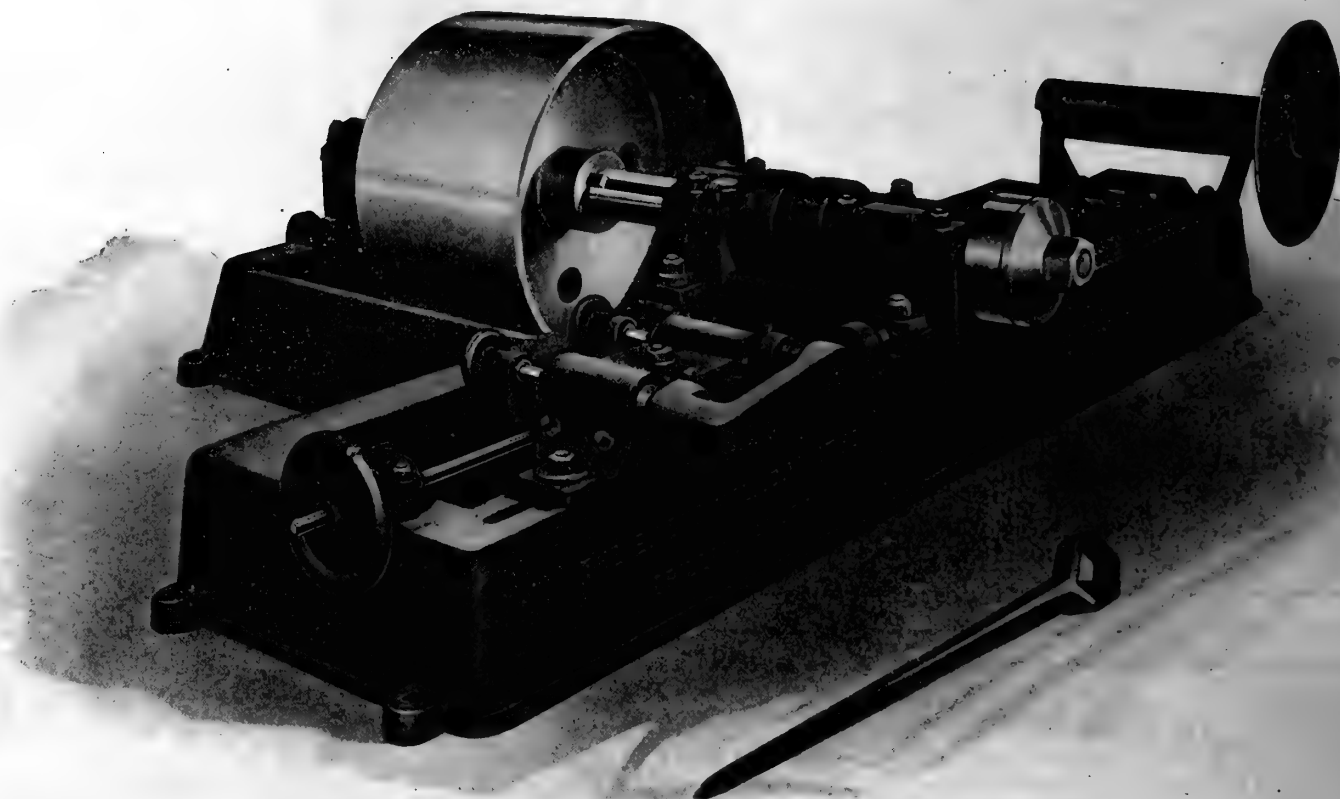
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of Quality

A New Exponent of Long's Quality Line



No. 2 Iron Saw Frame, for Saws from 46" to 66" in diameter.

OF few parts; mounted on a *unit* base—one solid casting—with bearings fully water cooled; with every part adjustable and every part *accessible*; this machine is built for heavy production and long service.

Note especially the improved saw guide, the connected bearings and the freedom of interference with the driving belt, no matter from what position the machine is driven.

*Send a post card for our Bulletin
on this machine, it's worth while.*

E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver
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Represented by:

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THAT FUNNY STORY!

IF anybody tells you that funny story—that the Waterous Company are selling Sawmill Machinery solely on the strength of a reputation—that we are building machinery that is behind the times; in other words that we are trying to hand the Canadian Sawmill trade a fossilized product—*don't you believe it.*

We have been in business 60 years, it is true,—we are proud of it and say so wherever we can—but that doesn't mean that we are building Sawmill Machinery that

is sixty years out of date. On the contrary, just because of that experience, we are in closest touch with Canadian sawmill conditions, and in the best possible position to build the right machinery to keep abreast—or a little ahead—of those conditions.



Every new idea that is likely to improve Canadian sawmilling is given consideration in the designs we place on the market. No matter what success we may have with any machine we get out, we are willing to change it if it will do the work better or cheaper when altered.

As an illustration. In 1909 we placed a new Band Mill on the market that was a success from the start. It is being used in place of other makes in many of Canada's largest sawmills to-day. We issued a catalogue in the same year to describe the working and construction of this machine. Just now we are reprinting this catalogue—and we are spending more than \$300.00 to buy new cuts to illustrate the improvements we have made in this new Mill since it was put on the market less than five years ago. *Is that letting a reputation sell machinery for us?*

And remember this—our motto is “Up-to-date machinery for up-to-date mills”—and our machinery is built to conform to this motto. When you specify Waterous you specify machinery that is modern in every way—and that is backed up by a reputation that is sixty years old.

The Waterous Engine Works Co., Ltd.

BRANTFORD, CANADA

Agency—H. B. Gilmour, Vancouver, B. C.

Branch—Winnipeg, Man.



"FROST KING" METAL

Our thirty five years experience in metal mixing enables us to place on the market a rabbit that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

\$5,000,000.00

worth of mixed metal sold annually.

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Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

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London, Eng.

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LEATHER
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OUR
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Canada Lumberman

Vol. 34

Toronto, February 1, 1914

No. 3

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Globe - Kearney & Foot - McClellan - J. B. Smith

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NICHOLSON FILE COMPANY

Port Hope, Ont.



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THIS

3" chain broken at 11,770 lbs. Tested
at McGill University in 1909

25% More Weld = 25% More Strength = 25% More Wear

Tested Steel Chain

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by

McKinnon Chain Co.

Secured only with
welds like THIS



Concentrate your buying and secure better service

Canada's Departmental House of Mechanical Goods
provides an exceptional opportunity for economical
buying.

More than twelve different departments, each a
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84-98 St. Antoine Street.

Our Transmission, Steam Goods, Woodworking
Machinery and Machine Shop Supply Dept. will be par-
ticularly interesting to you. Anything from Dick
Balata Belt to Yale & Towne Hoists can be secured at
our nearest warehouse.

The Canadian Fairbanks-Morse Co.,
Limited

Canada's Departmental House of Mechanical Goods

Montreal
Winnipeg

Toronto
Calgary

St. John, N.B.
Vancouver

See Our Dick's Balata Belt Advertisement on Page 51

UNLINED LINEN FIRE HOSE (Circular Woven and Seamless)

"Underwriters Best" Red and Blue Stripe

MADE to conform to the requirements of the Associated Factory
Fire Insurance Companies and is approved and accepted under
every high-grade flax-hose specification.

GUARANTEED WATER-PRESSURE 500 LBS. PER SQUARE INCH

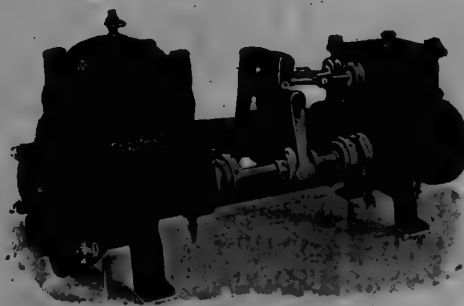
Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER

F. REDDAWAY & COMPANY 995 St. Paul St.
Sole Makers of MONTREAL



Have You Tried Them?

They are pumps that live. Let us know your requirements.



The
**Smart Turner
Machine Co.**

Limited

Hamilton - Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless
Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty
breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

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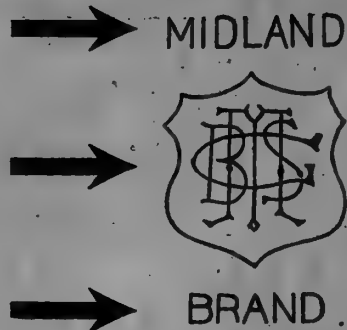
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MONTREAL

Midland Planing Mill Products

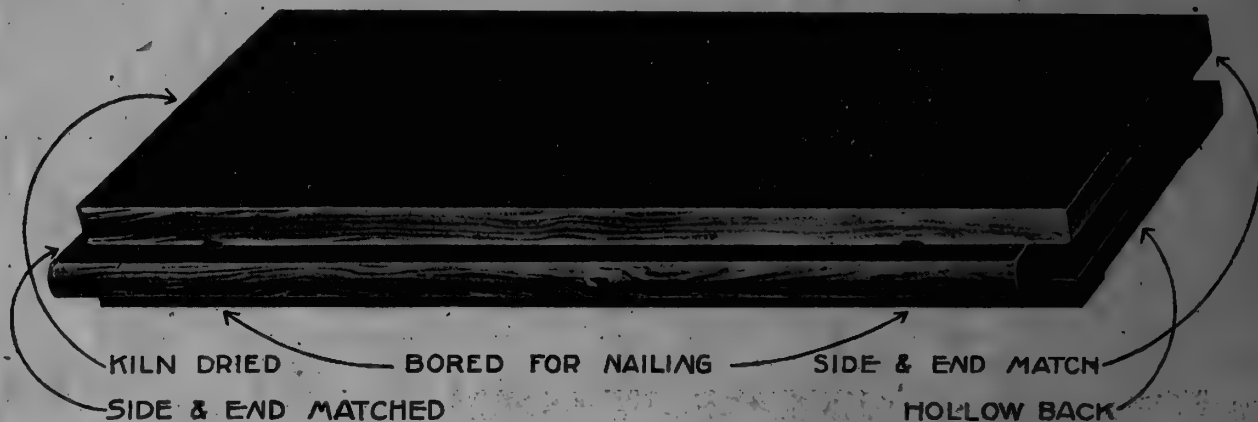
THE LEADING STOCK LINES

**Pointers
on**



**BEECH
HARDWOOD
FLOORING**

- Pointer No. 1.**—Government Tests show that in wearing qualities it will out-last Birch or Oak.
Pointer No. 2.—Its appearance is rich and even in color, similar to Extra Selected Red Oak Stock.
Pointer No. 3.—On account of its close texture, it machines nicely and does not sliver.
Pointer No. 4.—Our stock is from around Midland, where the finest Beech and Maple in North America grows.
Pointer No. 5.—This stock runs strong to Long Lengths.
Pointer No. 6.—It makes the **Best** hardwood flooring.
Pointer No. 7.—It's the **Cheapest** hardwood flooring, only because it is the least known.
Pointer No. 8.—9/16 Beech is the Greatest Bargain Buy to-day. Especially suited for Apartment Houses and Private Dwellings.



Grading, Etc.

Selected Red:—Has one face clear of all defects and is selected for color. Lengths 3 ft. to 16 ft.

Mill Run:—Contains product of the board with No. 2 strictly out. 13/16" stock runs strongly to clear, about 75% being clear. 9/16 stock is practically all clear.

Flooring is measured $\frac{3}{4}$ in. over face.

13/16" Flooring Standard Widths are $1\frac{3}{4}$, $2\frac{1}{4}$, and $2\frac{3}{4}$ in. face.

9/16" Flooring Standard Widths are $1\frac{3}{4}$, 2, and $2\frac{1}{4}$ in. face.

PRICES	13/16" Selected Red, Standard Widths	\$54.00 per M.	9/16" Selected Red, Standard Widths	\$44.00 per M.
	13/16" Mill Run, Standard Widths	44.00 per M.	9/16" Mill Run, Standard Widths.....	36.00 per M.

Prices above are F.O.B. Cars, Midland

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

Your Orders For Red and White Pine

We are in position to take care of orders for almost anything in Red and White Pine.

In addition to a large assortment of 1, 2, 3 & 4", we have on hand the following dimension timber in Red and White Pine.

6 x 6 — 10/20'	60,000'	10 x 12 — 12/18'	15,000'
6 x 12 — 16 & 18'	2,000'	12 x 12 — 12/24'	60,000'
8 x 12 — 12/20'	6,000'		

Prompt shipment can be made of any of the above. We also have a dry Kiln and Planing Mill in connection, and are in position to do milling on short notice.

George Gordon & Company
 Limited
 CACHE BAY - - - ONTARIO

Stock List of Unsold Lumber Now Ready

Write for copy

The Colonial Lumber Co., Limited.

Pembroke, Ont.

“Golden Rod”

The Soft Cork Short Leaf

Yellow Pine Finish

The Finest Finish Produced

Specialists in Quartered Oak

The stock with the flashy figure

A COMPLETE STOCK OF AMERICAN HARDWOODS

Wistar, Underhill & Nixon, Philadelphia, Pa.

Canadian Representative—G. H. Johnson, 125 Tyndall Ave., Toronto, Ont.

Mason, Gordon & Co. 80 St. Francois Xavier Street, **Montreal, Que.**

Everything in Timber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

Write, Wire or 'Phone for Prices

Western Office:—Pacific Building, VANCOUVER, B. C.

No Order Too Large

Hocken can deliver the goods.



Hemlock, Pine, Hardwoods

With our mill running day and night we are able to supply special bills in Pine and Hemlock.

HOCKEN LUMBER CO., LIMITED

OTTER LAKE, STATION, ONT.

13 FT. STOCK
GOOD GRADE AND
MANUFACTURE

SPRUCE

1x9, 1¼x9 and 2x9.
SEE STOCK LIST
BELOW

For Quick Shipment from Stock in Yard. Rail or Water Deliveries.

Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Clear & No. 1
1x4	1x9	1½x7	2x4	2x9	3x7	1x4
1x5	1x10	1½x8	2x5	2x10	3x8	1x6
1x6	1½x4	1½x9	2x6	3x4	3x9	1x7
1x7	1½x5	1½x10	2x7	3x5	3x10	1x8
1x8	1½x6	2x3	2x8	3x6	3x11	1x9
					3x12	1x10

DRY SPRUCE, 10 to 13 feet LENGTHS (mostly 13 feet).

We also solicit Special Sawing Bills of 13 foot Spruce for future delivery.

QUEBEC & ST. MAURICE INDUSTRIAL COMPANY,

Portland, Maine

JOHN GILLIES
President

DAVID GILLIES
Vice-President.

J. S. GILLIES
Sec.-Tres.

Established
1873

GILLIES BROS.

Mills and Head Office
BRAESIDE, ONT.

Limited
Manufacturers of

WHITE PINE

RED PINE

SPRUCE

Planing Mill, Yard and Office
MORRISTOWN, N. Y.

New York City
Guy E. Robinson, 1123 Broadway

The
**Georgian Bay
Lumber Co.**

Limited

Waubashene, Ontario

Manufacturers of High Grade

**Lumber
and Laths**

**Fraser Bryson
Lumber Co., Ltd.**

Wholesale Lumber Dealers

Selling agents for Fraser & Co., Manufacturers

Mills at Deschenes, Que., near Ottawa

**White Pine
Red Pine
Spruce
Lumber and Lath**

Office, Castle Building
53 Queen St. Ottawa, Can.

Wholesale Lumber

Car and Cargo Shipments

JOHN M. DIVER

DETROIT, MICH.

"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow
Pine, in the Rough

Cedar Telegraph and Electric Railway Poles 20 to 80 ft.

Write for prices

Timber for R. R. Construction and
Commercial Purposes, a Specialty.

OFFICE:—413 Hammond Bldg.
Phone Cadillac 2275

T. H. Garrett Lumber Co.

Manufacturers of **YELLOW PINE LUMBER**

Mills:—

Selma, La.
Jena, La.
Melton, La.
Waukegan, Tex.
Buena Vista, Ark.

Long Leaf Timbers,
Short Leaf Finish
and
Railroad Material

Send your inquiries and orders to:—

General Sales Office
Suite, 1220 Chemical Building, ST. LOUIS, Mo.

Quebec

Spruce and Hemlock

Lumber

Cedar Shingles

Lath

BARTRAM BROTHERS

Limited

Ed. T. Saxe, 200 Claremont Ave., MONTCLAIR, N.J.

Hope Chambers, OTTAWA, CAN., Head Office

BROMLEY



Look where you will,

“Bromley’s” is the best stock in sight

Red and White

PINE

Wm. H. Bromley

Pembroke, Ont.

Wholesale
Lumber
Lath
Shingles

Quincy Adams Lumber Co., Limited

MANUFACTURERS AND WHOLESALERS OF

White Pine, Birch, Spruce and Hemlock

Mills on G. T. Ry.—LONGFORD
KOSHEE
RAVENSWORTH
On T. & N.O. Ry.
EARLTON and
M'LEAGE 156½

Toronto, Canada

801-2 C.P.R. Building,
Cor. King & Yonge

The Rideau Lumber Co., Limited
Trafalgar Building, Ottawa, Ont.

1913 Sawing

SPRUCE

Dry Factory White Pine—All thicknesses.

Nice Line 1 x 4 and up—6/11 Moulding White Pine.

I WANT YOUR ORDERS

and solicit your inquiries for

Pine, Spruce, Hemlock, Hardwoods, Lath

Deal with me and you will be satisfied every time.

C. A. SPENCER

*Wholesale Dealer in Rough and
Dressed Lumber, Lath
and Shingles*

Eastern Townships Bank Building, MONTREAL, Quebec

Winter mill now sawing. Can cut
bills in Hemlock, Pine or Spruce.
Spiles and ties for quick shipment.
Planing mill in connection with saw
mill at Fesserton.

Fesserton Timber Company, Limited
15 Toronto Street, TORONTO

In Transit

4 Cars 1 x 6 to 12 B & B Steam

Dried Yellow Pine Finish

3 Cars 3 X B. C. Shingles, A Cotton Brand

THE LONG LUMBER CO.
HAMILTON, ONT.

Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

Hibernia Building

New Orleans, La.



MARITIME PROVINCES

Fraser Limited

Fredericton, N. B.

SELLING AGENTS FOR

Donald Fraser & Sons, Limited
Cabano, P. Q.

Fraser Lumber Co., Limited
Plaster Rock, N. B.

F & M Lumber Co., Limited
Whitworth, P. Q.

MANUFACTURERS OF

Spruce Lumber

Rough and Finished

Shingles, Lath, Piano
Sounding Board Stock, etc.

The J. B. Snowball Co.

Limited

Chatham, New Brunswick, Canada

FOR SALE

20	M.	3 x 4 1/2	Spruce	10 ft., and up
50	M.	2 x 5	"	" "
20	M.	2 x 3	"	" "
20	M.	2 1/2 x 6	"	" "
30	M.	2 1/2 x 7	"	" "
140	M.	3 x 4 and 5	"	" "
300	M.	3 x 6	"	" "

All in good shipping condition.

Now contracting for delivery during the
coming Summer for 1 x 4, 5 and 6
Spruce, also 2" Spruce.

CORRESPONDENCE SOLICITED

We invite correspondence re
"Dalhousie" Brand
N. B. Cedar Shingles *of all grades*

Special Prices for shipment to
All Ontario Points

Dalhousie Lumber Co., Limited
Dalhousie, New Brunswick
Agents for Ontario **R. Laidlaw Lumber Co., Limited**
Toronto

If You Need a Position

a classified advertisement in the **Canada Lumberman and Woodworker** will find one for you.

If You are a Capable Man

no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.
The rates are most reasonable, write us.

Canada Lumberman and Woodworker, Toronto

Edward Partington Pulp and Paper Co., Limited

Head Office, St. John, N.B.

Mills: St. John, N.B. Blackville, N.B. Marysville, N.B.

Manufacturers of

Bleached Sulphite Pulp

Spruce, Pine and Hemlock Lumber, Laths

Hardwoods

JOHN McKERGOW, W. K. GRAFFTEY,
President Managing-Director

**The Montreal Lumber
Co. Limited**

Wholesale Lumber

Ottawa Office: Montreal Office:
46 Elgin St. 759 Notre Dame St., W.

**WHOLESALE DEALERS
SPRUCE**

13 Foot and 16 Foot

**Lath and
White Cedar Shingles**

CHRISTY-MOIR CO.
149 Broadway, New York City

JOHN P. NEWMAN

Saw Mill and Novelty Works. All kinds of Hard and Softwood Lumber. Dimension Stock in Beech, Maple and Birch. Mattress and Cot Frames, Etc. *Send me your requirements, I can furnish you stock that will please.*

PHONE 37 RESIDENCE 15
WIARTON, Ont.

HAEBERLE LUMBER CO.
LUMBER AND TIMBER

White Pine, Norway Yellow Pine, Hemlock, Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties.

Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

Hardwood Flooring

The Celebrated Diamond Brand

End Matched, Bored,
Polished and Bundled

Manufactured by

SIEMON BROS., LTD.

For prices write

W. T. EAGEN

Selling Agent for Ontario and Quebec
2 Toronto Street,

Phone M. 2814 TORONTO

**Watchman's
Portable
CLOCKS**

We are the only MANUFACTURERS
in America

WRITE US FOR DETAILS

Hardinge Bros., Inc.
1775 Berteau Ave., CHICAGO

Lumber

We are in the market for the
output of mills manufacturing

White and Red Pine

Spruce, Jack Pine

or Hemlock

also the output of mills manufacturing any or all kinds of **Canadian Hardwoods** — Write us at once. Will pay the highest cash prices and ship stocks out promptly. We are buying now our 1914 stocks. Write us giving list of lumber you have or amount you expect to have this season.

**C. G. Anderson Lumber
Company, Limited**

Manufacturers and Strictly Wholesale
Dealers in Lumber

**206 Manning Chambers
Toronto**

THE MEAFORD LUMBER CO.

have the following stocks, namely:

**Maple, Birch, Ash, Basswood
Elm, Spruce, Hemlock and Pine**

We deal in all kinds of Sawn Lumber.

We will be pleased to answer all enquiries and to quote close prices.

THE MEAFORD LUMBER CO.
TORONTO

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

AUGER & SON
QUEBEC

**The Canada Wood
Specialty Co., Limited**

Manufacturers:

Lumber, Hardwood Flooring,
Handles, Poles, Bed Frame
Stock, Cheese Box Hoops,
Heading, Baskets, Etc.

Write, Telegraph or Telephone
your orders

Orillia, Ont.

**R. LAIDLAW
LUMBER CO.**
LIMITED

Toronto

Sarnia

Buffalo

SPECIALTIES

Sawn Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N. Y.

James W. Sewall

For eleven years my business has been growing. Since 1910 I have made detailed timber estimates and maps of over 700,000 acres of land. In 1913 on one contract alone I planted 200,000 trees. Experience and system aid correctness and efficiency. Let me serve you.

Timber Estimates
Boundary Surveys
Topographical Maps
Planting

16 Centre Street
Old Town, Maine

OATS, HAY,
Bran, Shorts and Flour
—CAR LOADS—
A. W. FAIRWEATHER
Traders' Bank Bldg., TORONTO

HOBART & CO.
CHOICE
Southern Hardwoods
Cypress, Kiln Dried North
Carolina Pine
Send Us Your Inquiries
53 State St., BOSTON, MASS.
Yard at Prison Point
Cable Address "Hobco, Boston."

Success or Failure

in modern lumbering depends in an increasing degree on thorough knowledge of operating conditions.



This knowledge when obtained by our cruises and timber-land reports is dependable.

Munson-Whitaker Co.
Consulting Forest Engineers
Chicago, 512 Comm'l National Bank Bldg.
New York Boston
470 Fourth Ave. 622 Tremont Bldg.
Pittsburgh, 900 Arrott Bldg.

Saw Mill Help

Competent employees for saw mills and woodworking plants are scarce. The best of them read this paper regularly. To get in touch with good men send a "Want Ad" to the

Canada Lumberman and Woodworker
220 King Street West, TORONTO

"Well Bought is Half Sold"

Special Hardwood Offer

125,000 ft. 4/4" No. 1 Common & Better Birch
12,000 ft. 4/4" No. 1 Common Birch
40,000 ft. 4/4" No. 2 Common Birch
40,000 ft. 4/4" No. 1 Common & Better Basswood
18,000 ft. 4/4" No. 2 Common Basswood
16,000 ft. 6/4" Firsts & Seconds Basswood

F.O.B. Deer Lake

Dry and Well Manufactured
Good Grades Prompt Shipments

Order early and avoid delay by Car shortage

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine and Hemlock Lumber

1026-32 Traders Bank Bldg, Toronto, Ont.

Mills: Byng Inlet, Ont.

We are Buyers of
Hardwood Lumber
Pine and Spruce
Veneers (3 or more ply) Handles (all descriptions)
Staves Hoops Headings
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Dealer in All Kinds of
Hardwood Lumber
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**The Penetanguishene Planing Mill
Sash and Door Factory**
Planing of all kinds done by carload. Railroad Switch in connection with mill. All classes of building material, lime and cement for sale.
ALPHONSE TESSIER, Builder & Contractor
PENETANGUISHENE, ONTARIO

STAONAL LUMBER CRAYONS
Waterproof Permanent
Will not wash or rub off.
SUPERIOR MFG. CO., LIMITED
93 Church Street, Toronto

FOR SALE
For Immediate Shipment
Hardwood Lumber
Moulding, Sash and Doors
SPECIALTY: Dressing of wood in transit on the Intercolonial Railway.
The Rimouski Industrial Co., Ltd.
Rimouski, P.Q.



Watson & Todd, Limited

OTTAWA, ONTARIO

**Dry Norway
and White Pine**

All Sizes and Grades

Everything in Lumber

Wholesale and Retail

Write or wire us for your requirements

The McLennan Lumber Co.
Limited

Montreal, Canada

**California White Pine
California Sugar Pine
and Arizona Soft Pine**

Best Stock for Factory and Pattern Lumber

Ask **LOUIS WUICHET**

Room 716 Railway Exchange, CHICAGO, ILLINOIS

Notice To Lumber Manufacturers

In order to meet the keen competition in the lumber market, you insist on machinery of the highest efficiency to reduce your mill expenses.

Why not pay a little attention to the expenses of your drive.

A Shaw Motor-Headworks

will save you

Time, Timber, Men and Money

For further particulars write

RUSSEL BROTHERS

Fort Frances, Ont.

For low prices and prompt shipment of
**Yellow Pine Timbers
Short Leaf Finish
Chestnut --- Oak --- Ash
Cypress
New Brunswick Shingles**

TRY

Fred S. Morse Lumber Co.

Box 1600

SPRINGFIELD, MASS.

Casey-Shaw Lumber Co.

Limited

SUDBURY, ONT.

Manufacturers of

Lumber and Lath,

Planing Mill Work

General Office, Sudbury, Ont.

ESTABLISHED 1855

THE McGIBBON LUMBER CO.
OF PENETANGUISHENE

Manufacturers of and Dealers in

Lumber, Lath, Shingles, Etc.

HEMLOCK BILLSTUFF a Specialty of which we have the Best Assortment on Georgian Bay.

Don't wait to write. Phone us your requirements.

All stock sized or matched if required.

Our Yards are Unequalled for Drying Lumber

TORONTO

WE BUY FOR CASH

Mill Cuts of

Pine, Spruce and Hemlock

Write Us

C. A. Larkin Lumber Co'y., Limited

627 Confederation Life Building,
TORONTO, ONTARIO

JOHN DONOGH & CO.

Wholesale Dealers

Spruce { 1 x 4-5-6-8 Dressed or Rough
2 x 8-2 x 10

Red Pine 1 x 4-5-6, Dressed or Rough

White Pine { 1 x 4 and wider Mill Culls
1 x 10-12 Mill Culls

ALL DRY STOCK.

1205 TRADERS BANK BUILDING, TORONTO

F. N. WALDIE, President. R. S. WALDIE, Vice President.
W. E. HARPER, Secretary.

The

Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

HEAD OFFICE,
12-14 Wellington Street East, TORONTO, ONT.

YOUR CARD ON THIS PAGE

will reach your present and prospective customers oftener than your travellers.

¶ Keep your name before lumber buyers by constant advertising.

¶ Familiarity breeds business.

**Canada Lumberman
and Woodworker**
Toronto, Ontario

R. B. ELGIE, Managing Director

J. B. JARVIS, Sec.-Treas.

The Elgie & Jarvis Lumber Co., Ltd.
LUMBER MERCHANTS,

18 Toronto Street, TORONTO, ONT.

Telephone Main 5584

Pine, Hemlock and Spruce
(Rough or Machined)

Lath and Crating Material

For Immediate Shipment—

4000 HEMLOCK TIES

3000 CEDAR TIES

100 M 10x10 HEMLOCK TIMBER

Spears & Lauder

Manufacturers and Wholesale Dealers
501 Kent Building - Toronto

QUEBEC

J. Burstall & Company

Timber and Lumber Merchants

**Shippers of All Kinds
of Lumber and Timber**

Head Office, Quebec, Que.

Branch:

Montreal—Board of Trade Bldg.

J. Burstall & Company, Ltd.

57 Gracechurch St. E. C., London, England

WINTER SAWING

We have started "Double Tower"

OUR New Mill commenced operating on January 5th, and is now running steadily. We started double tower, that is running night and day, on January 15th.

We are open to contract for our Hardwoods and Softwoods, and would be pleased to receive any enquiries for special bills.

Fassett Lumber Company, Limited

Fassett, Que.

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

CORRESPONDENCE

SOLICITED

Mills at:

St. Pacome, Que., Canada

**On I. C. Ry. 75 Miles East of
Quebec City**



Large stock of 1" 1¼", 1½" and 2" WHITE PINE, Bone dry.

SPECIAL LOW PRICES

on 1¼", 1½", and 2" Shipping cull sidings and cut ups.

Offices at
97 St. James St., Montreal

Mills at
Mont Laurier, P. Q.

Mack Axes

The World's Best

HERE are six styles of axes that are made from special crucible steel bit and capable of retaining an edge longer than any other axes made.

**FELLER, MAXAX
CHIPPER
BEAVER**

"66"

OTTOWA CHIEF

Our motto of "Quality and Workmanship" is the foundation of our success and every axe we make can be depended upon to make good our motto.

Get our Prices and Particulars.

The Mack Axe Works
Beaver Falls, Pa., U. S. A.

"CANADIAN MADE"

Fourdrinier Wires and Cylinder Covers

Manufactured in Ottawa by the
Capital Wire Cloth & Mfg. Co. Limited
Dandy Rolls and Cylinder Moulds
Repaired and Recovered

Machinery and Timber For Sale

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 16-ft. Slash table. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |
| | POWER PLANT |
| | 1 24 x 36 Slide Valve Engine with 40-in. x 12-ft. extra heavy double arm split fly wheel. |
| | 2 Double Duplex, high pressure Water Pumps. |
| | 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam. |
| | 2 125 h.p. Water Wheels. |
| | 1 Upright Engine for sawdust conveyor. |
| | 1 10 h.p. Engine. |
| | 1 Mitts & Merrell Hog. |
| | 1 Wood Machine for 22-in. wood. |
| | 1 Wood Machine for 16-in. wood. |
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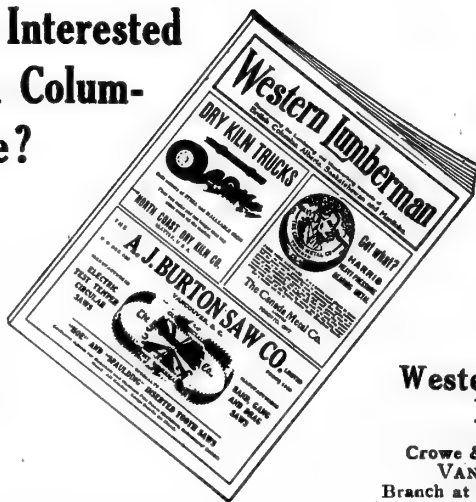
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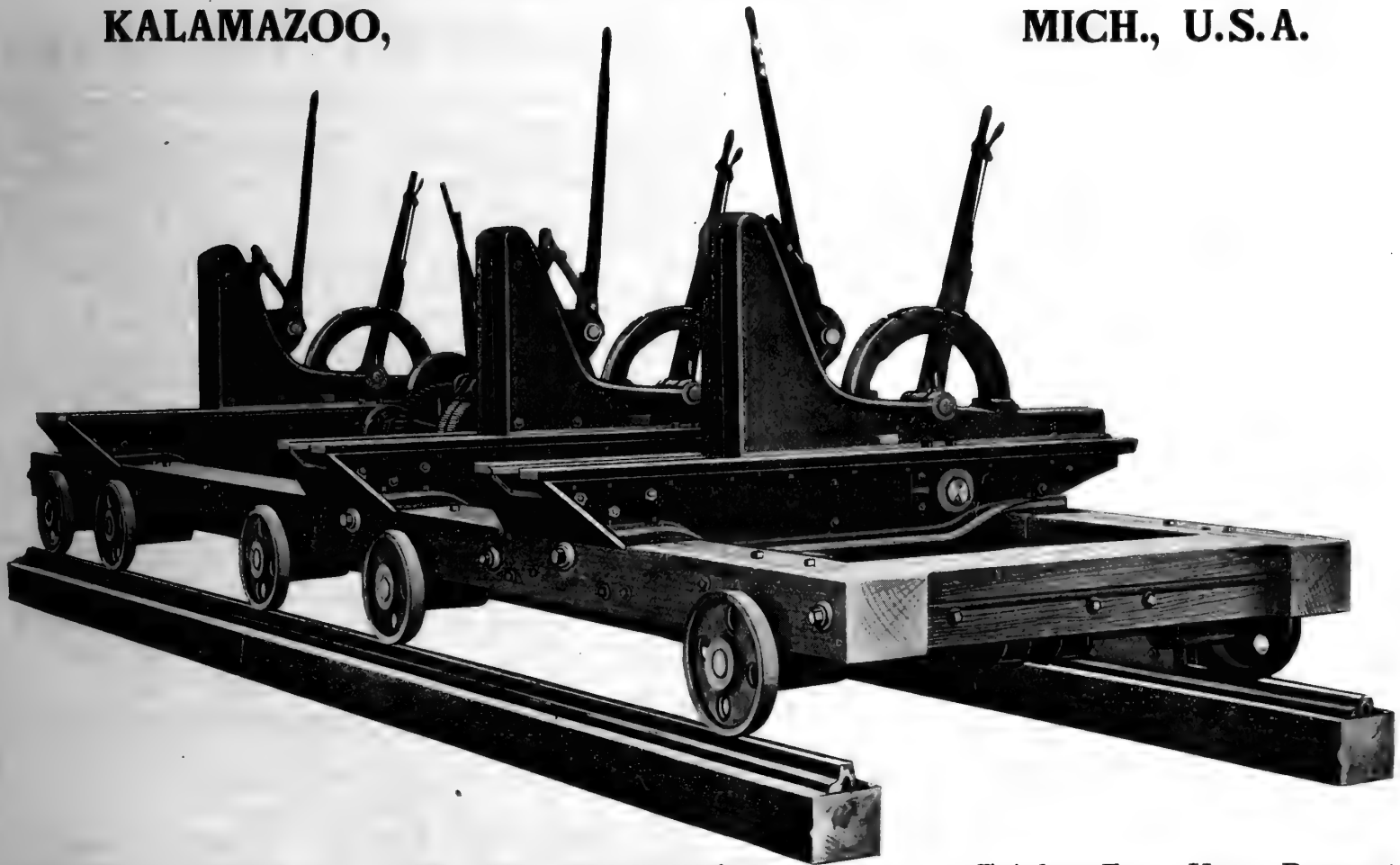
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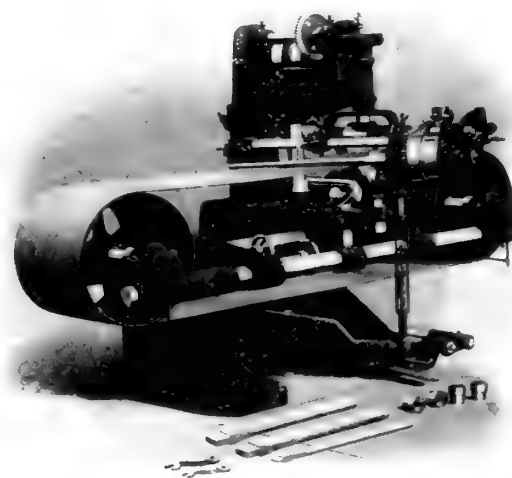
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The Defiance Machine Works, Defiance, Ohio, U.S.A.



No. 6 Automatic Belt Polishing Machine.



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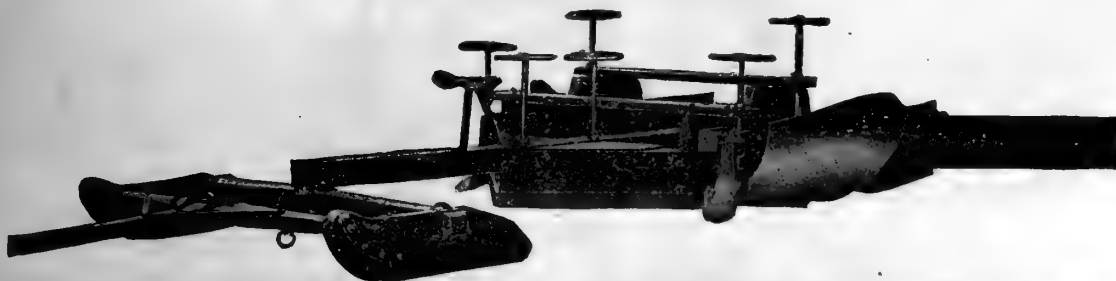
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The Standard Tools



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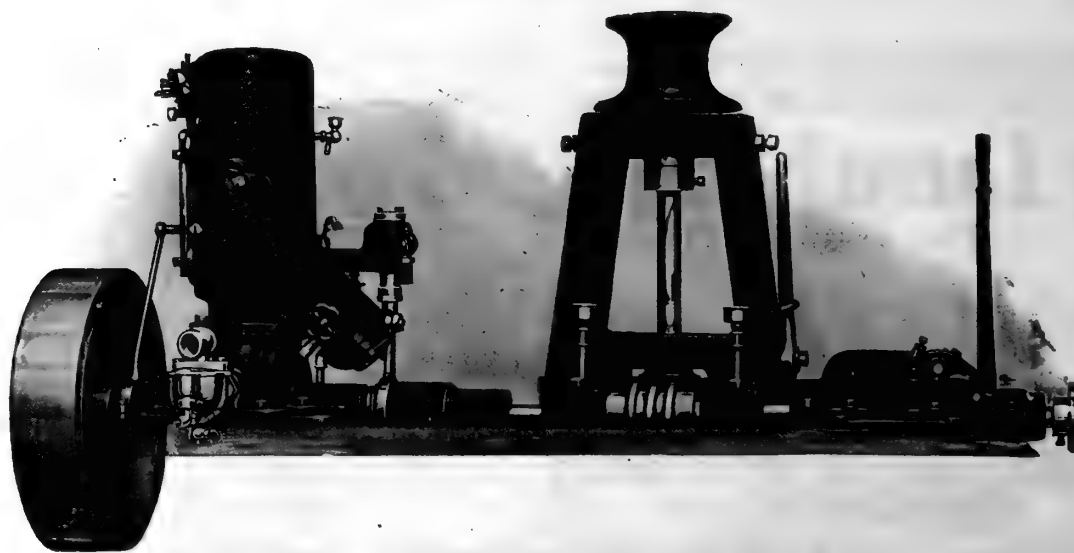
The illustration shows one of our lumbermen's pointers or alligator punts with engine installed. They may be used for many purposes and have proved a good investment to every lumberman who has used them.

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- " " draw themselves over rapids and portages.
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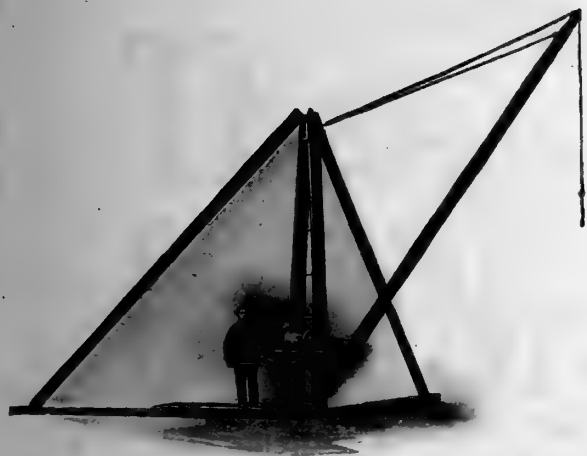
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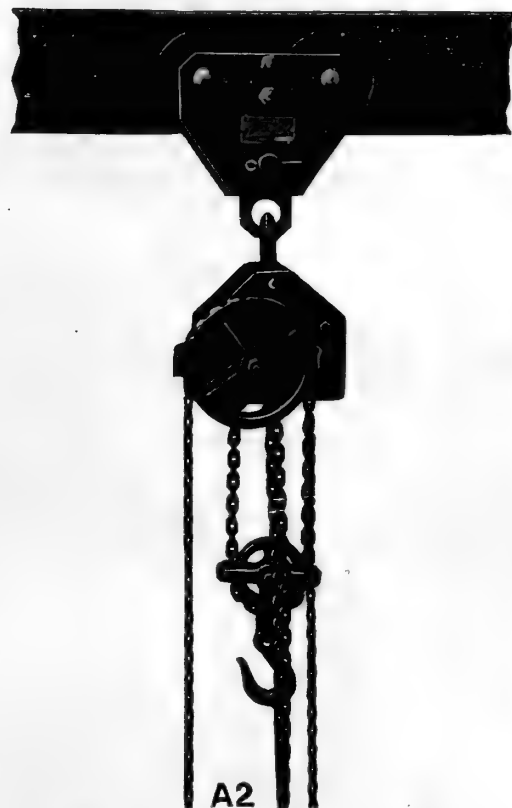
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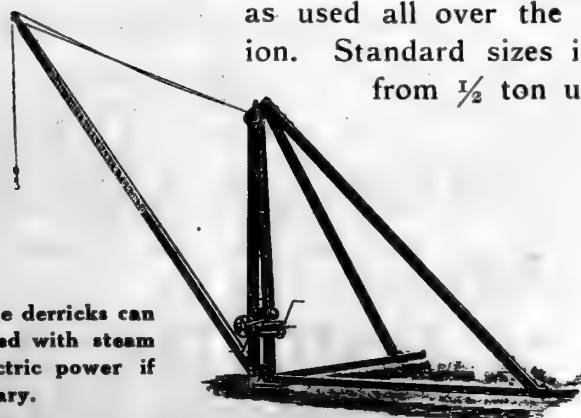
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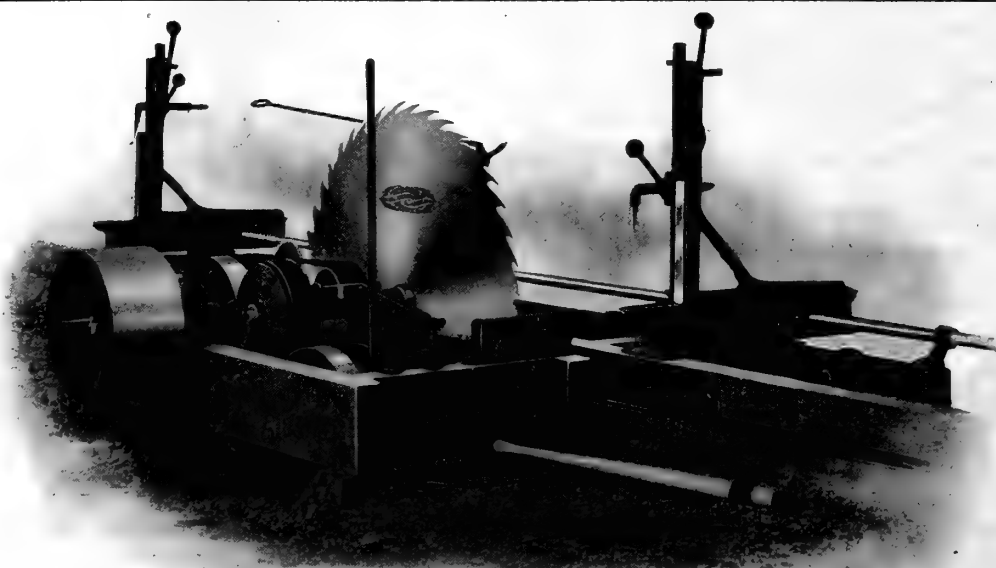
1 x 4	Mercantile Spruce
1 x 5	" "
1 x 6	" "
1 x 7	" "
1 x 8	" "
1 x 9	" "
1 x 10	" "
1 x 12	" "
2 x 4	" "
4/4	Cull Strips
4/4 and 8/4	Mill Run Tamarack
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Size Husk 3 feet by 6 feet 3 inches
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, February 1, 1914

No. 3

1913—What It Teaches for 1914

This issue of the Canada Lumberman contains statistics telling of the course of trade during the year 1913. Some of our readers may think that the less said about the trade of last year the better it will be for all concerned, but others are not of the same opinion and feel that the lessons of the past year are nearly as valuable to them and to the trade in general as would have been a more general earning of cash profits. Taking things in general, we have been forcibly taught during the past twelve months that the lumber business depends not only upon business conditions throughout the country, but also upon the methods followed by those who are engaged in it. This is brought out forcibly by the contrast between the course of trade in eastern and in western Canada respectively. In the east, thanks to a natural combination of circumstances, lumbermen were unable to over-produce during the winter of 1912-13. In fact the year commenced with stocks greatly reduced, both in the yards and at the mills, while the stocks of logs for 1913 sawing were much smaller than in previous years. During the year, the output of Eastern Canada was further reduced, by strikes at St. John, N.B., and by an unusually large number of serious fires at sawmills. Many of the largest mills in the country were out of commission last year. Thus it happened that, although business depression was general throughout Canada and the United States, the lumbering industry and trade of Eastern Canada did not actually suffer to anything like the extent that would have been the case had there been any over-production. In Western Canada a different story is told. One needs only to read the report of the annual meeting of the Mountain Lumbermen's Association, published in this issue, to be convinced that the lumber industry and trade of British Columbia is in a practically hopeless condition, so far as its ability to protect itself in times of business depression is concerned. The capacity of the mills is in excess of the natural consump-

tion of the markets which have to be supplied, and, in addition, the manufacturers of the Western States have found their way into these same markets and are making matters still worse. These are conditions which may be of little importance in times of pronounced business activity, but whenever depression sets in they become vital. The contrast between the results of the depression in the two parts of Canada, east and west, illustrates the evil of over-production and the advantages of curtailment at one and the same time, and brings them home in a very forcible manner.

There were many events of unusual interest to the lumber trade of Canada during the year 1913 which might be mentioned in review. They are discussed in detail, however, in other parts of this issue. Probably the most important of these was the removal of the duty on lumber entering the United States. This opened to Canadian lumber a wide and varied market. Practically every kind of Canadian lumber which has sufficient value to stand the cost of freight to the United States, will feel the effect of this change. We may count upon this widening of our markets being a decided benefit to the industry during 1914 and future years. Along the same line, a new influence has come into effect in connection with the lumber industry, namely, the approaching opening of the Panama Canal, which will make it possible for the lumber of the Pacific Coast to be delivered in Eastern Canada, the Eastern States, and Great Britain in competition with the products of mills situated much closer to these markets. This influence is already making itself felt, although the actual opening of the canal is still some distance in the future. Enquiries about prices of west coast products delivered via the Canal to eastern points are already being made, and are affecting purchases of other stocks which formerly were not affected by competition from the west. Lumber manufacturers of eastern Canada will be affected equally with those of the eastern and southern States. New Brunswick, Nova Scotia, Quebec and Ontario manufacturers are commencing to discuss the effects of this development upon their markets. The opinion is frequently expressed that British Columbia products will soon be a much greater factor in connection with eastern markets than they have been in the past.

From the reports which are published in this issue and which deal with the situation in all parts of Canada, it is evident that events are shaping themselves for improved trade during 1914. The people of the west are not so hopeful as those of the east, but they were among those who went furthest in the direction of over-confidence last year. They were more active in discounting the country's future. The east sinned quite enough in this respect to deserve all it got, but the west went much further and may be expected to recover less quickly. It is evident, however, that a feeling of encouragement has commenced to spread over the country. It may be a little premature, and it may take us longer to throw off the ill effects of our recent trouble than we think. The next few months, even weeks, will probably show us whether this is the case or not, but it does seem reasonably certain that the question is now simply one of time, as the process of readjustment has gone far enough to show that the financial, commercial and economic situation in Canada is entirely sound and has been suffering only from a temporary, although violent, indisposition.

It has been estimated that the forest revenue of British Columbia for 1913 will amount to \$3,000,000, an increase of \$400,000 over the revenue of 1912. It represents about 28 per cent. of the gross provincial revenue and is said to be nearly three times as great as that of any other province in Canada. The total expenditure for 1913 on the forest branch will approximate \$350,000, of which \$150,000 has been expended on permanent improvements. The number of men on the staff during the height of the season was 460, which included 340 guards and patrolmen, 30 rangers, 25 forest assistants and members of the technical staff of the force, and 11 district foresters. Collections for the forest protection fund are made at the rate of 1½ cents an acre from areas of 8,500,000 acres under license, 1,000,000 acres under timber lease, and 1,500,000 acres of privately owned timberlands. The Dominion Government contributed this year \$167,000. Adding to this the contributions of timber holders and owners and railway companies, there is available a total fund of \$347,000.

Lumber Trade of Ontario During 1913

Manufacturing Statistics Show an Increased Cut in Georgian Bay District—Financial Stringency Affected Trade—Outlook Improving

Looking back upon the lumber trade of Ontario during the year 1913, one is struck, probably more than anything else, by the fact that the course of trade followed very closely along the lines which were expected by those who studied trade conditions closely. For some time previous to the first of January, 1913, many shrewd business men were sounding a warning in connection with the great extension of speculative building and speculative business development in general. The year opened with a very strong trade for nearly all varieties of lumber. The market was already wide, varied and brisk and continued so until the month of March. Then, when the spring trade should have been opening up and making business even more lively, circumstances developed which had been predicted by careful observers for some months previous. The banks of Canada, with practical unanimity decided that the time had come to cry a halt in the unlimited extension of credits. The money stringency immediately commenced and the lumber trade of Ontario, along with that of all the other provinces of Canada felt the effects immediately. For a time the situation seemed doubtful and it appeared as though a short period of rest would clear the air and bring business conditions back to a normal basis, but it was soon found that the financial situation was far less satisfactory than was at first believed. The country, in fact, was seriously crippled for want of money, which had been tied up in real estate in practically every part of Canada. It took many months for this situation to be remedied. In fact the process is still under way today, although such progress has been made as to make it certain that the corner has been turned and that sound business expansion may now proceed.

Although the lumber business felt the money stringency greatly, the actual effect upon the lumber trade of Ontario was not really disastrous. There were many reasons for this. In the first place, the lumber industry was better situated probably than many others, because it had entered the year with greatly reduced stocks. The year 1912 had seen such an active demand for lumber that stocks were depleted to a greater extent than had been the case for many years previous. The winter of 1912-13 was a poor one for logging operations and the output in the woods was far below the average. Manufacturers were thus prevented from over-producing, and, as the season advanced, stocks were depleted almost to the vanishing point. Moreover, before the money stringency set in, a large amount of construction work of various kinds was already under way, so that the demand from this quarter was greater than it would have been, had the scarcity of money developed a few months earlier. The actual amount of lumber moving during the last nine months of 1913 was much smaller than usual, but on account of the circumstances above outlined, there was a fair enquiry and prices were maintained remarkably well.

The above conditions apply more particularly to the lower grades. The intermediate and upper grades of white pine moved very slowly, owing to the strong competition of California sugar and white pine, Mexican white pine, Idaho white pine and long leaf and short leaf yellow pine from the Southern States.

The intermediate grades of white pine were more seriously affected by yellow pine than by any of the other foreign stocks. "B and better" could be laid down in Toronto at prices very little in advance of the mill prices of white pine. The better grades of Ontario white pine suffered from the competition of Idaho, Mexican and California white pine. These were laid down at Toronto at prices from \$2 to \$4 per thousand less than the manufacturers' prices for the Canadian article of a similar grade. These foreign woods, although not quite so good as our native products, fill the bill fairly well, and the consumer is being educated to accept and use them, so that there is a strong possibility that they have now obtained so strong a hold in our markets that it will be a long time before our white pine in "shop and better" will regain the position which it occupied in the early part of 1913. It would be unsafe to predict that this is certain to be the case, yet the indications at present are strongly in that direction.

Culls and box pine reached the peak during 1913 and kept about the same level throughout the whole season. These grades did not meet with the same competition from foreign stocks, owing to the freight charges being the same upon poor stock as upon high grade and having a greater relative bearing upon the cost.

One of the important events affecting the lumber trade during the year 1913 was the removal of the duty upon lumber entering the United States. Eastern spruce during 1912 and 1913 had been successfully increasing its market in Ontario and had become a strong competitor of hemlock and white pine strips. The removal of the

duty upon lumber entering the United States, however, gave to the spruce of Eastern Canada a much wider and more convenient market in the State of New York and the New England States, where large quantities of it are being marketed at present. Unless the United States market fails, it is likely that the manufacturer of eastern Canadian spruce will turn more naturally to it in future than to Ontario. Nevertheless the hold which this stock secured upon Ontario markets during 1912 and 1913 was such that a good market for it will continue under normal conditions.

The market for shingles fluctuated considerably. At the first of the season, there was a very strong demand on account of the large consumption created by the heavy storm during the month of March. After this demand had been satisfied shingles commenced to sag and kept on sagging until manufacturers and dealers were nearly driven to despair. Toward the latter part of November, prices stiffened a little and continued fairly firm through December. There is a fair prospect now that, before the month of June, shingles will have got back to their normal level. The stimulation in prices which occurred in November and December was largely the result of the removal of the duty upon shingles entering the United States.

Lath were firm throughout the whole of the season of 1913 and prices were fairly satisfactory to the manufacturer. The year closed with practically no visible supply of lath in manufacturers' hands.

Stocks of lumber in the retail yards throughout the province of Ontario at the present time are much below normal. This has been brought about chiefly by the money stringency which has prevented retailers from making speculative purchases or from securing large quantities of stock on credit. For many months, the retailer has been able to purchase only such stocks as he had immediate requirement for. Wholesalers throughout the latter part of 1913 exhibited extreme caution in their business method and did not push sales unless they were sure of the ability of the buyer to pay. Frequent requests for renewal of credit, by the trade throughout the country made a marked change in the methods of business followed by wholesalers. Many retailers sought renewals last year, who for years past had been in the habit of taking advantage of the discount for cash.

The course of business during 1914 is still a sealed book to the trade. There are signs, however, which point already in the direction of steady improvement. Some of these have been mentioned above. An important factor is, that in spite of the extensive amount of speculative purchasing of real estate during the last few years, Canada is still only on the threshold of its development, and so long as its growth is confined within reasonable limits, extension of a very satisfactory nature is certain. Had it not been for the speculation and consequent depression of 1912-13 the present year would have been the greatest for building operations that Canada has ever known. The demand for houses, factories and warehouses is still great, however, and the only necessary factor, which is still wanting, is confidence in our financial ability to provide for such rapid growth as is required. This confidence is returning today. It has been increasing since the turn of the year. The retailer, through whom the demand for lumber is expressed will probably continue doing business on a cautious basis, at least until the volume of the spring trade is more clearly indicated. The cost of money is the key to the whole situation. It is still difficult to secure, although easier than it was a month ago. If it becomes reasonably cheap, the other factors are already in evidence for making the lumber trade of 1914 active and profitable.

At the beginning of the year 1913 a material increase occurred in the prices of hardwoods in eastern Canada. From the lumber manufacturer's point of view, this was a pleasant situation, but from the point of view of the wholesaler, as soon as the tightness in money developed, the higher prices were the cause of some uneasiness. These two factors combined to act as a drag upon the movement of stocks. Fortunately, however, only the movement was affected to any extent. Prices were well maintained and at the present time there is no indication of any easing off in hardwood prices in Ontario. The export market in Canadian hardwoods fell off considerably at the end of 1913 and nothing has been heard from it as yet during 1914. Stocks to-day are reduced considerably and even a falling-off in the demand would not be likely to make much change in prices.

Weather conditions in eastern Canada have not been favorable for hauling this year. The season for cutting was good. Similar conditions have prevailed in northern Ontario. Reports received during the third week in January stated that the swamps were not yet

frozen. Many of the roads had to be broken down and built up afterwards in order to obtain good hauling.

Indications at present are that the cut of hardwoods in Ontario and Quebec this year will be light. The most noticeable feature of the market during 1913 was the increase in the demand for one inch first and second birch. The demand for this line was greater than for any other. This class of birch is being used quite extensively for interior trim and the demand for thicker than two-inch seems to be dropping off.

Ash was very scarce during the season of 1913, and the demand for it was greater than the supply. It commences to look as though this is a situation which may be expected to continue in Canada in the future.

Ontario Production Shows Slight Increase

Contrary to the general opinion among lumber manufacturers in Ontario, the production in Georgian Bay and Northern Ontario, as shown by reports received by the Canada Lumberman, was greater during 1913 than during 1912. The total production, as shown in the following table, during 1913 was 818,367,455 feet, as compared with a production of 793,178,072 feet during 1912, showing an increase for 1913 of 25,189,383 feet. Although this increase is slight, it is important in view of the fact that a decrease was expected by many of the Ontario manufacturers. The output of the year 1912, however, had shown a large falling off as compared with 1911, when the production of the same district amounted to 831,472,640 feet. When one recalls the poor weather conditions which prevailed during the winter of 1912-13, it is reasonable to suppose that the small increase shown during 1913 would have been much larger. If better weather had prevailed, the output for the year would probably have approached that of 1911. Among the more important increases for the year 1913 are the following:—Blind River, 5,500,000 feet; Keewatin, 6,800,000 feet; Kenora, 15,500,000 feet; Little Current, 11,000,000 feet; Otter Lake, 4,000,000 feet; Spanish Mills, 8,400,000 feet.

Georgian Bay and Northern Ontario Lumber Production

	1913 Feet	1912 Feet
Barry's Bay	300,000	260,000
Berkeley	1,000,000	1,000,000
Berlin	2,000,000	1,500,000
Berriedale	4,000,000	4,000,000
Biscotasing	1,000,000	8,500,000
Bigwood	6,000,000	16,000,000
Blind River	24,000,000	18,451,593
Boakeview	3,500,000	4,000,000
Bracebridge	6,250,000	7,800,000
Bridgenorth	500,000	500,000
Burk's Falls	4,800,000	4,350,000
Bala	3,300,000	3,000,000
Chapleau	5,000,000	5,000,000
Cache Bay	26,400,000	26,400,000
Callander	8,000,000	8,000,000
Chatham	5,600,000	1,200,000
Collingwood	5,000,000	3,800,000
Colpoys Bay	2,500,000	2,110,000
Charlton	6,500,000	6,000,000
Canonto	1,000,000	1,500,000
Caldwell's Mills	1,500,000	1,500,000
Earlton	800,000	450,000
Falding	750,000	750,000
Fesserton	5,500,000	6,000,000
Fort Frances	54,000,000	54,000,000
Gravenhurst	25,000,000	25,000,000
Golden Lake	250,000	100,000
Hepworth	1,250,000	1,750,000
Haliburton	2,700,000	950,000
Hope Bay	450,000	450,000
Huntsville	11,000,000	13,750,000
Havelock	90,000	140,000
John's Island	16,000,000	15,000,000
Kearney	7,500,000	7,500,000
Keewatin	27,725,000	20,900,000
Kenora	21,487,000	6,000,000
Kinmount	2,500,000	2,500,000
Lakefield	7,000,000	9,000,000
Lanark	1,026,310	.....
Leeburn	80,000	100,000
Lion's Head	4,000,000	2,000,000
Lindsay	5,500,000	5,000,000
Little Current	46,000,000	35,735,000
Longford	5,900,000	5,500,000
Lavant Station	400,000	.....
Magnetewan	1,500,000	1,500,000
Marmora	3,300,000	3,400,000
Midland	44,538,624	52,138,643
Mowat	2,500,000	.....
Massey	1,050,000	250,000
Marksville	2,500,000	2,000,000
New Liskeard	9,000,000	8,500,000
North Bay	19,349,242	24,000,000
Nesterville	21,776,300	22,376,700
Otter Lake	10,000,000	6,000,000
Owen Sound	17,000,000	19,700,000

Parry Sound	22,595,000	25,700,000
Penetanguishene	32,531,501	39,024,994
Peterboro	12,756,225	13,087,000
Port Arthur	34,200,000	34,200,000
Powasson	7,500,000	7,500,000
South River	2,100,000	2,750,000
Sarnia	26,843,000	32,832,000
Sauble Falls	400,000	700,000
Sault Ste. Marie	26,500,000	26,500,000
Shawanaga	1,000,000	1,500,000
Sucker Lake	2,500,000	500,000
Spragge	16,000,000	.....
Spanish Mills	33,400,000	25,000,000
Snow Road	1,125,000	1,585,000
Thessalon	2,820,471	7,642,592
Thunder Bay	2,900,000	2,000,000
Tobermory	716,000	500,000
Tomiko	11,920,607	15,705,357
Trout Creek	2,500,000	2,500,000
Utterson	790,000	875,000
Wilberforce	1,750,000	1,500,000
Walkerton	410,000	410,000
Waubashene	23,500,000	22,500,000
Wiarton	4,000,000	3,000,000
Other Places	50,487,175	48,354,193

818,367,455 793,178,072

Georgian Bay and Northern Ontario Lath Production

	1913 Pieces	1912 Pieces
Berriedale	400,000	400,000
Biscotasing	500,000	3,750,000
Bigwood	1,000,000	.....
Blind River	8,000,000	6,761,450
Bracebridge	2,290,000	1,700,000
Burk's Falls	500,000	600,000
Cache Bay	9,900,000	9,900,000
Callander	4,500,000	5,500,000
Collingwood	2,000,000	850,000
Canonto	100,000	200,000
Fesserton	1,000,000	1,000,000
Fort Frances	12,000,000	12,853,059
Gravenhurst	7,000,000	7,000,000
Huntsville	2,100,000	1,900,000
Havelock	5,000	10,000
John's Island	6,000,000	6,000,000
Keewatin	6,707,000	7,660,000
Kenora	6,066,000	1,000,000
Kinmount	600,000	500,000
Lakefield	2,400,000	4,500,000
Lion's Head	350,000	.....
Little Current	17,500,000	12,000,000
Longford	500,000	500,000
Lavant Station	25,000	.....
Marmora	50,000	50,000
Midland	21,156,200	25,282,000
Mowat	500,000	.....
Massey	95,000	.....
North Bay	8,626,650	8,000,000
Nesterville	6,115,100	6,620,400
Owen Sound	.....	2,000,000
Parry Sound	7,000,000	8,000,000
Penetanguishene	23,604,000	28,748,600
Peterboro	5,843,525	4,649,250
Port Arthur	7,266,000	7,266,000
Sarnia	16,832,000	14,781,000
Sault Ste. Marie	8,500,000	8,500,000
Spragge	5,000,000	.....
Spanish Mills	13,000,000	12,821,000
Thessalon	840,200	3,974,650
Tomiko	5,417,000	6,643,200
Utterson	150,000	.....
Walkerton	25,000	25,000
Waubashene	8,250,000	7,500,000
Other Places	17,789,880	16,884,750

247,503,555 246,330,359

Georgian Bay and Northern Ontario Shingle Production

	1913 Pieces	1912 Pieces
Boakeview	900,000	1,000,000
Bracebridge	600,000	1,325,000
Burk's Falls	1,300,000	.....
Colpoys Bay	300,000	300,000
Canonto	500,000	.....
Caldwell's Mills	100,000	500,000
Earlton	200,000	100,000
Gravenhurst	8,000,000	8,000,000
Golden Lake	50,000	60,000
Hepworth	100,000	300,000
Haliburton	1,775,000	218,000
Havelock	50,000	120,000
Kinmount	2,000,000	2,000,000
Leeburn	110,000	100,000
Lion's Head	1,000,000	200,000
Lindsay	7,000,000	7,000,000
Lavant Station	100,000	.....
Marmora	250,000	.....
Meaford	150,000	200,000
Massey	860,000	200,000
New Liskeard	1,800,000	2,000,000

North Bay	2,856,500	3,000,000
Owen Sound	6,000,000	9,000,000
Penetanguishene	990,000	147,000
Peterboro	7,913,000	7,094,750
Port Arthur	1,771,750	1,771,750
Sauble Falls	200,000	.....
Sault Ste. Marie	4,500,000	4,500,000
Sucker Lake .....	.....	400,000
Snow Road	1,900,000	2,100,000
Tobermory	191,000	300,000
Utterson	150,000	100,000
Wilberforce	300,000	230,000
Walkerton	50,000	50,000
Other Places	1,110,750	1,524,500
	55,078,000	53,841,000

Ottawa Valley Lumber Production

Output for 1913 Decreased by 37,000,000 feet—Details of the Operations—Better Outlook for 1914

Ottawa, January 22nd (Special to the Canada Lumberman): Like every other branch of business the lumber trade in the Ottawa Valley was disadvantageously affected by the financial stringency which prevailed all over the country almost throughout 1913. Opinions gathered from some of the leading lumbermen concur that last year, though a fairly good one for business, was not so good as 1912. The appended figures, show that the cut for 1913 was not so large as it was in the previous year by 37,668,201 ft. Last year opened with promise of good things ahead, but the year had not advanced very far before the money market began to show signs of weakness and, by spring, the signs became ominous. Business in general was affected. There are brighter days ahead though for 1914. Every lumberman interviewed admits this, and the statements recently published by the leading bank officials in their annual reports bear out the lumbermen's predictions. Bank officials agree that the worst is past in regard to tight money.

The recent amendment to the United States tariff is expected to bring more business from the south of the line than has come to the Ottawa Valley before. So far, no beneficial effects of that tariff have been felt here, but it is generally agreed that it is still rather early to look for results. While the changes in the tariff were being considered by Congress, United States buyers were not placing any more orders for lumber here than they were absolutely obliged to fill. The value of the lumber exported in 1913, according to the figures given out by the United States Consul in Ottawa, was \$185,425.88 less than in 1912. The total value of the export in 1912 was \$2,494,120.97, against \$2,303,695.19 in 1913. Had the tariff question been settled earlier in the year, there would probably have been a substantial increase in the value of the exports for 1913 over the previous year.

Another factor which militated against business locally last year, was the long period of dry weather, which caused a scarcity of water in the rivers and streams throughout the district, consequently hampering operations at some of the sawmills. The Hawkesbury Lumber Company had to shut down for several weeks during the summer owing to low water with the result that their cut last year was 42,000,000 feet against 61,000,000 in 1912. Given good conditions the cut last year would have been as large if not larger than in 1912 says Sir Henry Egan, the managing director of the company. The Estate James Davidson had their mills handicapped by low water and, consequently, their cut was 1,500,000 less last year than the year before. The destruction of the big saw-mill at the plant of J. R. Booth was the reason why their cut was not so large in 1913 as it was in 1912. The mill was destroyed by fire in the spring. Shepard and Morse cut 26,564,000 in 1913, against 18,118,000 in 1912 and report that general business was good. W. C. Edwards Company cut 75,000,000 feet which was equal to the cut of the year before.

The Golden Lake Lumber Company, Eganville, was not operating its mill last year, which accounts for a decrease of 11,350,000 feet in the output of 1914. Other decreases included the following: Gilmour & Hughson, Hull, 2,000,000 feet; Fraser & Company, Ottawa, 1,200,000 feet; Fassett Lumber Company, Fassett, 7,437,641 feet; Rideau Lumber Company, Ottawa, 500,000 feet; Colonial Lumber Company, Pembroke, 8,000,000 feet; R. & T. Ritchie, Aylmer, 1,000,000 feet. The increases included the following: Shepard & Morse, Ottawa, 8,446,000 feet; Riordon Pulp & Paper Company, Hawkesbury, 3,973,000 feet; Petawawa Lumber Company, Pembroke, 1,000,000 feet; Gillies Brothers, Braeside, 3,705,440 feet; Dennis Canadian Lumber Company, 6,000,000 feet.

The export business to England was poor throughout the year, a result again, of the general depression of business due to the scarcity of money. Though the export firms shipped more lumber to England in 1913 than in 1912 the figures do not mean that business was better.

There was comparatively little demand for high grades and a big demand for medium and low grade stock. Prices were firm and in several cases somewhat in advance of those which prevailed in 1912. With the demand for medium and low grades increasing and the sup-

ply none too good there is a probability of an increase in prices before long. With conditions as they now are in the lumber trade the speculator finds little attraction to busy himself.

Labor was plentiful all through the year, yet the wages paid remained up to the high standard.

Ottawa Valley Lumber Production

	1913 Feet	1912 Feet
J. R. Booth, Ottawa	75,000,000	80,000,000
W. C. Edwards, Ottawa and Rockland	75,000,000	75,000,000
McLachlin Bros., Arnprior	60,000,000	60,000,000
Hawkesbury Lumber Co., Ottawa	42,000,000	61,000,000
Golden Lake Lumber Co., Eganville .....	.....	11,350,000
Shepard & Morse, Ottawa	26,564,000	18,118,000
Gilmour & Hughson, Hull, P.Q.	23,000,000	23,000,000
Fraser & Co., Ottawa	12,800,000	14,000,000
J. Lumsden, Lumsden's Mills, P.Q.	15,000,000	15,000,000
Riordon Pulp & Paper Co., Hawkesbury	9,250,000	5,277,000
Petawawa Lumber Co., Pembroke	11,000,000	10,000,000
Fassett Lumber Co., Fassett, P.Q.	13,504,813	20,942,454
Rideau Lumber Co., Ottawa	2,500,000	3,000,000
Pembroke Lumber Co., Pembroke	20,000,000	20,000,000
Colonial Lumber Co., Pembroke	17,000,000	25,000,000
Gillies Bros., Braeside	28,661,020	24,955,580
Ferguson & McFadden, East Templeton	12,000,000	13,000,000
R. & T. Ritchie, Aylmer, P.Q.	9,000,000	10,000,000
Estate Jas. Davidson, Fort Coulounge	7,500,000	9,000,000
Jas. MacLaren Co., Buckingham, P.Q.	20,500,000	20,650,000
Dennis Canadian Lumber Co., Whitney, Ont.	6,000,000	.....
St. Lawrence Lumber & Box Co., Sth. Lancaster, Ont.	2,000,000	1,200,000
M. N. Cummings, Westboro, Ont.	850,000	1,100,000
Papineauville Lumber Co., Papineauville, P.Q.	5,000,000	5,000,000
M. Bertrand, Masham Mills	1,200,000	1,500,000
Smith Bros., Campbell's Bay	1,595,000	2,000,000
McMaster Lumber Co., Deschenes, P.Q. ....	.....	2,500,000
Other Places	35,000,000	35,000,000
Total	531,924,833	569,593,034

Ottawa Valley Lath Production

	1913 Pieces	1912 Pieces
J. R. Booth	5,000,000	9,000,000
W. C. Edwards	12,000,000	25,000,000
Estate Jas. Davidson	2,000,000	3,000,000
Jas. MacLaren Co.	3,280,000	3,220,000
M. N. Cummings	400,000	350,000
M. Bertrand	400,000	450,000
Colonial Lumber Co.	7,000,000	8,000,000
Dennis Canadian Co.	1,100,000	.....
Fraser & Co.	3,500,000	5,400,000
Gillies Bros., Ltd.	2,055,075	2,275,475
Gilmour & Hughson	5,000,000	2,500,000
Papineauville Lumber Co.	2,000,000	3,500,000
Pembroke Lumber Co.	4,000,000	10,000,000
Petawawa Lumber Co.	4,000,000	3,000,000
Rideau Lumber Co., Ltd.	675,000	.....
R. & T. Ritchie Ltd.	5,000,000	6,000,000
Shepard & Morse Lumber Co.	10,387,000	7,686,000
Smith Bros.	300,000	.....
Golden Lake Lumber Co. ....	.....	5,900,000
Other Places	2,500,000	2,500,000
Total	70,597,075	97,781,475

Ottawa Valley Shingle Production

	1913 Pieces	1912 Pieces
J. R. Booth	1,000,000	9,000,000
W. C. Edwards	7,000,000	20,000,000
Jas. MacLaren Co.	5,695,000	7,170,000
Estate Jas. Davidson	1,500,000	2,500,000
M. N. Cummings	900,000	500,000
M. Bertrand	450,000	500,000
Dennis Canadian Co.	980,000	.....
Rideau Lumber Co.	1,445,000	1,000,000
Riordon Pulp & Paper Co.	5,800,000	8,135,000
R. & T. Ritchie	1,000,000	2,000,000
Smith Bros.	400,000	.....
Other Places	15,000,000	15,000,000
Total	41,170,000	65,805,000

Ontario Stocks Depleted

Stocks of lumber are now very low. As soon as money matters loosen up and the demand improves, we think that the light stocks now held will disappear quickly. Lumber from the Southern United States is likely to affect trade in Ontario. On account of their unsatisfactory banking system, large United States manufacturers are forced to sell in times of panic at slaughter prices. Their free trade policy is bound to stagnate business there, as is shown by the history of the low tariff in the United States, we are likely to be affected adversely by conditions that are in prospect there. Nevertheless, we should have a good trade next year. We would have better trade and would keep more Canadian money at home, employing Canadian labor, if the government would give Canadian lumbermen the same tariff protection as is afforded to other Canadian industries employing less labor.—Chandler, Jones Lumber Company, Snow Road, Ont.

Reports From Readers Upon Trade Conditions

A Note of Optimism Prevails

Mr. J. A. Currie, president of Wilson Bros., Limited, Collingwood, Ont., visited Toronto recently on business. In conversation with the Canada Lumberman Mr. Currie said that the company's business during 1913, up to the month of July had been better than during 1912. In fact, the first six months were the best the company ever had. After that, of course, trade slackened off, but taking the year as a whole, its business was just about as large and profitable as that of 1912. The tightness of money brought about a decrease in the volume of orders during the last half of the year. Collections were very good throughout the year, but not quite as good as they had been during the previous year. The outlook at present according to Mr. Currie's view, is quite encouraging. Orders are increasing and the indications are that the improvement will continue. In regard to logging operations, Mr. Currie reports that they did not look very promising up to the end of December. A great deal of fallen timber, which was blown down in the storm of Good Friday was cut and skidded and ready for hauling in December, the lack of snow at that time looked rather discouraging. However, plenty of snow is now on the ground and no further difficulty is expected in connection with logging operations.

In our opinion hemlock will hold its price during 1914. We do not expect pine to be so strong. Hardwoods should be "O.K." if the log cut during the present winter is not so large. Labor conditions are improving. Men were none too plentiful during the early fall, but since December 31st there have been plenty offering. Wages are the same as last year and the cost of supplies is also about the same. This year we will increase the quantity of our cut somewhat, owing to depletion of our stocks and fairly good prospects for the coming spring and summer trade. Prices will doubtless depend to a considerable extent upon the total production. If not overdone, prices should at least hold steadily, if based upon the cost of logging, etc.—The Pearce Company, Marmora, Ont.

United States buyers played a waiting game throughout most of the year 1913, particularly in the white pine trade and we do not expect much speculative buying from that quarter in the immediate future. We believe, however, that the outlook for the general trade during 1914 promises good fair business. Good conditions prevailed in the export trade to Great Britain last year. The markets for shingles and lath were strong. The volume of trade was greater than in 1912 and profits were also larger. Stocks are now considerably smaller than they were a year ago. Lumber prices were higher last year than in 1912. In some classes of low grades the prices advanced from \$2 to \$6 per thousand.—Shepard & Morse Lumber Company, Ottawa, Ont.

The volume of trade during 1913 was greater than during 1912 and profits also showed an improvement. Prices were better all around. We now have large stocks than we had a year ago. Shingles and lath have been slow. In our opinion the trade during 1914 will not be as active as during 1913.—J. Austin & Sons, Kinmount, Ont.

The volume of trade during 1913 was about ten per cent. less than during 1912 and profits were also about ten per cent. lower. Prices were not quite so high as in the previous year. Our stocks are about the same as they were a year ago. The demand for shingles during 1913 was fair and the demand for lath was good. We expect that the trade during 1914 will be about similar to that during 1913.—The Knight Bros. Company, Limited, Burks Falls, Ont.

A large manufacturing company in the Ottawa Valley report that they expect as good conditions and prices during 1914 as during 1913. During 1913 prices were considerably better, they state, in all grades, particularly in spruce and the higher grades of clapboards. Shingles, however, declined towards the end of the season. At the first of the season shingles sold at a better price than in 1912, but, on the removal of the duty by the United States, prices declined. The volume of trade last year was about 8 per cent. better than in the year previous. Exports of spruce were about double those of 1912 and prices were considerably better. Exports of birch were smaller, but the prices were higher.

Our trade during 1913 was greater than during 1912. Profits and prices were about the same. Stocks are now a little heavier. There has been a good market for shingles and lath. The outlook for trade during 1914 is fair.—The John Carew Lumber Company, Lindsay, Ont.

The volume of trade during 1913 was less than during 1912. Profits were about the same as in the previous year. Prices on mill culls,

dead culls, etc., were better. Stocks are about the same as they were a year ago. The markets for shingles and lath were good. Export trade to the United States and Great Britain was fair. The outlook for 1914 is for better trade than during the past six months.—Colonial Lumber Company, Pembroke, Ont.

The volume of trade was greater than in 1912 and profits were better. Stocks are now about forty per cent. less than they were a year ago. The demand for shingles and lath was active all through the year and prices were good. There has been an active demand all season for No. 1 and 2 cull pine, spruce and hemlock, also lath and shingles. White pine strips have been active at an advance over last season of \$2 per thousand. Cutting-up lumber is slow selling, with prices about \$3 lower than last season. Stocks at mill points and in retail yards are, we think, about thirty per cent. less than a year ago. We expect good trade during 1914, unless adverse financial conditions prevail.—Wm. Milne & Son, North Bay, Ont.

During 1912 the best price of hemlock was \$16. During 1913 it was \$20, but owing to the slight increase in wages and the much advanced cost of provisions, the increase in profits is only about fifteen per cent. There is practically no hemlock lumber in the manufacturers' yards today and retail yards have light stocks. The slackening off of the trade is really a benefit to our industry, for, were it otherwise, the trade would have to seek substitutes for hemlock and a drifting of trade from its natural channels is more or less detrimental.—Hocken Lumber Company, Limited, Otter Lake Station, Ont.

The outlook for the Canadian lumber trade looks good. We can see no reason for a poorer trade than during 1913. We think that the United States trade will hold about the same. Possibly it may improve by spring. The volume of trade was greater during 1913 than 1912. Medium and low grade stocks have been higher in price. The quantity of lumber on hand today is about the same as a year ago. Lath were higher throughout 1913.—The Cleveland-Sarnia Saw Mills Company, Limited, Sarnia, Ont.

Our sales were about double those of 1912, but our cut was smaller. Profits have been about the same as during 1912. Prices have been from twenty-five to forty per cent. higher than in the previous year. The demand for lath has been below the average and the demand for shingles above the average. We expect that trade during 1914 will be less active, owing to the general tightness of money.—G. T. Knight, Meaford, Ont.

As stocks are low, we think that the market will not be flooded during 1914. We also believe that there will be a good general demand for all classes of lumber, especially for hemlock and hardwood. We found profits on hemlock during 1913 about twenty per cent. better and on hardwoods ten per cent. better than during 1912. Hemlock prices have been about \$5 per thousand higher. The market for shingles and lath has been good.—Utterson Lumber Company, Utterson, Ont.

We did a slightly larger trade in 1913 than in 1912. Our profits and our prices were also better. Our stocks are now about the same as they were a year ago. Although we have had better prices than in 1912, expenses have also increased considerably. The movement of stocks has been fairly rapid and payments have been good, considering the tightness of money. We expect that during the early part of 1914 trade will be quiet, but that conditions will improve when spring opens.—Shortreed Lumber Company, Kearney, Ont.

The volume of trade during 1913 was about the same as during 1912. Prices were lower, with the exception of the box and cull trade, which were higher. Stocks are now about the same as they were a year ago. Lath are strong and well shipped up. The trade with the United States has been fair since the removal of the duty. We feel that the outlook for 1914 trade is merely fair.—Fraser & Company, Ottawa, Ont.

There was a greater volume of trade for the year 1913 than for the year 1912 and profits were better. Prices were about ten per cent. higher than during the previous year. Our stocks are about the same as they were a year ago. There was a good demand for lath during 1912. The export trade to the United States was good during the past year. We believe that the outlook for 1914 trade is fair.—Muskoka Wood Manufacturing Company, Limited, Huntsville, Ont.

The volume of trade during 1913 was greater than during 1912. Profits were better than in the previous year and the average price of lumber was about one dollar higher. Stocks are about the same as

a year ago. There has been a good market for lath during 1913. The export trade to Great Britain was fair. The outlook for 1914 trade is fair.—Pembroke Lumber Company, Pembroke, Ont.

Ottawa Valley camps in a number of cases are short of supplies and are suffering for want of snow to make roads. Unless more snow comes soon, the cost of hauling logs already cut will be greatly increased. Manufacturers' stocks today are about one-third less than they were a year ago. The outlook for 1914 seems to be bright.—M. N. Cummings, Westboro, Ont.

Shingles were in great demand during 1913 as a result of a large number of buildings being wrecked and unroofed during the storm last spring. This year we will put in a heavy stock of maple and beech. We expect that there will be a good demand for quartered maple and that beech will be a little lower, but in fair demand. We look for a heavy run of custom sawing, owing to the large quantity of timber blown down last spring.—Orrie Taylor, Massey P. O., Ont.

We did a larger trade during 1913 than during 1912. Our profits were about the same as in the previous year. Prices were about nine per cent. better. Our stocks are about the same as they were a year ago. The demand for shingles and lath during 1913 was good. We do not feel that the outlook for 1914 is very bright.—Laurence Bros., Canonto, Ont.

The price of good lumber during 1913 was low as compared with 1912. Mill culls, however, were high. Stocks are now about the same as they were a year ago. There has been a good demand for shingles and lath. The export trade to the United States was quiet and to Great Britain fair. The outlook for 1914 trade is fair.—Gillies Bros., Limited, Braeside, Ont.

The volume of trade during 1913 was less than 1912. Profits and prices were about the same as in the previous year. We have less stock on hand this year than a year ago. There has been a good market for lath. The export trade to the United States was about the same as in 1912. The outlook for 1914 trade is not very promising.—Spanish Mills Company, Limited, Spanish Mills, Ont.

We believe that the outlook for 1914 trade is fair. We do not anticipate any further decrease in prices. Stocks of logs will be much

lighter this winter. Several mill men in this section are not taking out any stock. We do not think manufacturers of lumber need worry.—Reid Bros., Lavant Station, Ont.

The outlook is that our trade during 1914 will be better and brighter than it was during 1913. Our profits last year were better than in the previous year and our volume of trade greater. Our stocks are now lower than they were a year ago.—Herman Weismiller, Bala, Ont.

The volume of trade during 1913 was greater than during 1912 and profits were better. Prices also were a little in advance. Stocks are now heavier than they were a year ago. The outlook for 1914 trade is favorable.—The Clyde Forks Lumber Company, Ca'dwells Mills, Ont.

We believe that hardwoods will be lower in 1914 than in 1913. Hardwood logs are now selling on the Bruce Peninsula at \$3 per thousand lower than last year. Stocks of hardwood lumber are heavier to-day than they were a year ago.—Chas. Pedwell, Lions Head, Ont.

In our opinion the prospects for 1914 are not encouraging. Most of the mills are now carrying over large stocks and the amount of timber which must be taken out this winter or spoil, will be a serious handicap from the millman's point of view.—J. E. Murphy & Company, Tobermory, Ont.

Hemlock prices were \$2 higher during 1913 than during 1912. Basswood and elm were also higher. Other hardwoods and pine were selling at about the same price as in the previous year.—W. B. Davidson, Brighton, Ont.

We think that the lumber trade during 1914 will be good. During 1913 the trade with Great Britain was good. Stocks today are about 20 per cent. less than they were a year ago.—Georgian Bay Lumber Company, Waubaushene, Ont.

The outlook for 1914 trade is only fair. So far this year, we have had only about one inch of snow. Unless we get snow soon the log crop will be short.—Keewatin Lumber Company, Limited, Keewatin, Ont.

The better grades of hardwoods must advance in price during 1914. There is a good outlook for 1914 and the markets in the United

CANADA'S EXPORTS OF WOOD AND MANUFACTURES OF WOOD TO THE UNITED KINGDOM DURING THE LAST FIVE YEARS

ARTICLES.	1909.		1910.		1911.		1912.		1913.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Wood and manufactures of:—										
Wood, unmanufactured:—										
Logs..... M. ft.	1,011	19,164	3,135	41,060	1,187	26,689	1,772	27,440	4,498	74,103
Lumber,—Basswood..... M. ft.	271	6,761	165	4,912	331	11,755	659	24,303	340	9,418
Deals, pine..... St. Hd.	25,315	1,617,354	23,873	1,556,229	21,704	1,406,444	16,728	1,342,589	17,507	1,285,863
" spruce and other..... " "	125,287	4,782,490	144,852	5,825,732	148,651	6,471,153	137,456	5,309,113	114,797	4,683,821
Deal ends..... " "	7,297	287,713	8,134	334,481	7,244	310,295	6,672	281,978	4,403	176,449
Laths..... M.	3,490	7,288	20	130	15,637	37,558	25,844	58,285	7,939	21,261
Palings..... " "	48	530	77	769	528	10,290	60	604	80	805
Pickets..... " "	951	21,975	3,594	17,305	4,186	21,196	1,263	13,211	7,516	29,735
Planks and boards..... M. ft.	71,819	1,469,768	72,507	1,387,439	79,778	1,659,701	96,795	1,965,224	81,618	1,825,549
Scantling..... " "	33,664	354,668	42,330	487,262	35,584	434,534	29,222	358,009	24,142	278,306
Shooks..... " "		17,070		137,149		231,703		116,881		167,857
Staves and headings..... " "		19,614		26,468		24,904		30,014		19,272
Other lumber..... " "		167,860		247,084		203,644		152,356		168,242
Total lumber.....		8,753,091		10,024,960		10,828,177		9,657,567		8,666,608
Timber, square,—Ash..... Tons	552	9,484	380	5,689	228	3,779	64	1,067	73	1,497
Birch..... " "	10,344	110,757	11,226	132,702	8,931	112,651	13,079	156,395	18,195	224,718
Elm..... " "	4,657	134,435	4,090	115,390	7,430	219,732	6,475	225,442	8,169	248,129
Oak..... " "	7,242	211,884	3,871	107,640	8,272	205,047	9,579	187,756	9,432	256,688
Pine, red..... Tons	1,510	45,579	4,460	136,952			1,631	39,578	1,866	51,144
" white..... " "	21,504	683,995	17,498	554,235	18,996	597,121	21,648	811,800	26,307	939,916
Other timber..... " "	2,530	54,134	1,268	16,134	917	11,204	1,452	16,806	1,125	12,017
Total timber, square.....	48,339	1,250,263	42,793	1,068,742	44,774	1,149,534	53,928	1,438,844	65,167	1,747,409
Other wood, unmanufactured.....		1,600		36,520		56,706		484		3,597
Total wood, unmanufactured.....		10,024,123		11,171,282		12,061,106		11,124,335		10,492,017
Wood, manufactured:—										
Doors, sashes and blinds.....		56,985		21,116		9,963		13,462		6,693
Household furniture.....		55,661		49,602		24,777		44,846		27,311
Matches and match splints.....		53,514		93,539		83,611		10,332		164
Spool wood and spools.....		40,778		81,649		96,395		55,122		57,407
Wood pulp,—										
Chemically prepared..... Cwt.	139,540	342,446	21,094	42,252	4,113	8,219	756	1,920	322	643
Mechanically ground..... " "	1,529,029	742,274	1,682,143	888,898	958,765	488,709	1,295,427	672,441	1,434,649	827,490
Other wood, manufactured.....		190,092		214,309		244,530		220,572		234,385
Total wood, manufactured.....		1,481,750		1,396,365		956,204		1,018,695		1,154,093
Total wood and mfrs. of.....		11,505,873		12,567,647		13,017,310		12,143,030		11,646,110

States are quite promising. Stocks are lower than they were last year.—The Stone Lumber Company, Marksville, Ont.

There was a greater volume of trade during 1913 than in the previous year and profits were better. Prices also were slightly higher. We have not so much stock on hand as a year ago. The outlook for 1914 trade is good.—Alfred Mitchell, Powasson, Ont.

We look for a fair season in 1914 with prices unchanged. Our trade during 1913 was better than the trade in the southern part of Ontario:—McCamus and McKelvie, New Liskeard, Ont.

We do not expect the lumber trade to be quite so brisk during 1914 as it was during 1913. There are indications of a scarcity in hemlock stocks.—Jacob Kaufman, Berlin, Ont.

Local trade conditions are fair, but we are unable to say anything about the outlook for 1914.—Estate A. McDonald, Peterboro, Ont.

Sales of Ottawa Pine Cuts

The Timber Trades Journal, London, England, in its issue of January 10th, says:—We understand that the usual annual contracts for the purchase of the Ottawa Valley cuts of pine have been concluded for next season's shipment at slight concessions in price for the first and second qualities, and on the same basis as last year for the thirds and fourths. As usual, J. R. Booth's cut has been purchased by J. Burstall & Company and Robt. Cox & Company, and the Edwards production has again gone to Watson & Todd. We learn that the over-wintering pine deal stocks are the lightest on record, especially in first and second qualities, and holders of these latter goods on this side should therefore stand out for a fair profit. Quebec spruce is held by shippers for higher values, but the reduction in freights will counterbalance the increase, and City St. John spruce is quoted at £9 for 7 and 8 in. The square timber selling season is close at hand, and within a few weeks we may expect the usual an-

nual visits of Canadian shippers, though unfortunately there are very few of the old brigade now left.

Ottawa Exports to the United States

The declared value of lumber exports, from Ottawa, to the United States during the calendar year 1913, as furnished by the United States Consul General's office was as follows:—

Lumber and Log products:—

Ash	\$2,904.97
Basswood	3,375.66
Birch	947.90
Cedar	692.28
Elm	246.00
Hemlock	10,841.06
Lath	106,602.04
Match Blocks	1,540.93
Mill Buttings	14,060.84
Pickets	36,492.87
Pulpwood	77,378.27
Railway Ties	15,603.44
Red Pine	9,394.32
Spruce	394,164.24
Spruce plank	23,884.32
Telephone and telegraph poles	937.95
White pine	1,511,422.86
White pine deals	41,482.04
White pine plank	1,667.46
White pine timber	4,278.16

Shingles:

Cedar	46,400.63
Pine	4,620.49

CANADA'S EXPORTS OF WOOD AND MANUFACTURES OF WOOD TO THE UNITED STATES DURING THE LAST FIVE YEARS

ARTICLES		1909.		1910.		1911.		1912.		1913.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			\$		\$		\$		\$		\$
Wood and mfrs. of:—											
Wood, unmanufactured;—											
Bark for tanning.....	Cords	19,659	122,118	15,087	83,264	12,949	78,138	7,919	46,768	5,802	29,842
Firewood.....	"	29,409	77,458	18,413	46,604	19,330	46,055	17,693	57,936	16,434	48,523
Knees and futtocks.....	No.	19,799	15,618	13,274	7,556	4,772	3,068	7,845	6,631	14,139	20,597
Lathwood.....	Cords	913	3,465	1,524	10,310	400	1,600	324	1,134	895	3,892
Logs,—											
Elm.....	M. ft.	690	8,136	353	3,983	1,201	13,106	526	6,999	404	5,125
Hemlock.....	" "	3,360	31,797	2,034	15,273	778	6,946	1,950	17,339	918	7,404
Pine.....	" "	4,431	20,981	1,392	20,102	4,726	26,610	7,955	69,287	1,555	24,101
Spruce.....	" "	11,048	109,784	12,042	123,363	13,760	152,327	8,644	72,708	4,027	45,260
Other logs.....	" "	90,494	738,387	94,136	796,596	102,397	962,834	65,191	571,823	89,687	868,740
Lumber,—											
Basswood.....	"	2,561	52,179	2,795	61,576	3,514	75,844	1,252	33,361	581	12,074
Battens.....	"		2,391		22				3,713		
Deals, pine.....	St. Hd	1,130	61,519	1,332	83,305	1,932	115,529	816	46,248	1,956	78,355
Deals, spruce and other.....	" "	8,817	351,825	12,461	572,103	5,291	247,703	11,494	491,544	18,115	743,561
Deal ends.....	" "	273	7,516	480	14,142	245	6,888	684	19,567	1,080	30,141
Hickory.....	M. ft.									26	1,318
Joists.....	"			101	1,510						
Laths.....	M.	691,619	1,586,943	751,729	1,852,211	667,603	1,627,818	638,545	1,651,822	680,372	1,743,248
Palings.....	"	17	425	24	250				4,586		
Pickets.....	"	29,950	157,117	42,166	196,615	27,176	148,290	28,220	154,680	31,482	171,782
Planks and boards.....	M. ft.	774,217	14,814,106	970,413	17,877,863	817,948	15,948,791	776,992	13,634,108	926,620	16,248,542
Scantling.....	"	30,021	391,265	44,030	593,452	41,532	571,723	47,953	641,156	76,875	1,079,107
Shingles.....	M	1,057,338	2,520,339	918,788	2,298,055	711,624	1,648,448	577,167	1,451,878	542,311	1,374,569
Shooks.....	"		13,646		26,300		8,323		12,388		21,618
Staves and headings.....	"		60,690		35,309		47,053		35,747		21,299
Other lumber.....	"		242,471		319,401		197,792		92,152		77,107
Masts and spars.....	No.	322	1,560	269	610	144	456	360	1,881	91	462
Match blocks.....	"		2,989		3,953		6,095		2,263		1,710
Piling.....	"		74,002		129,418		170,734		202,374		127,371
Hoop, hop, telegraph and other poles.....	"		43,896		55,810		78,521		74,219		65,148
Posts, cedar, tamarack and other.....	"		32,248		46,930		34,228		30,229		24,075
Shingle bolts, of pine or cedar.....	Cords	12,324	47,214	16,533	72,764	10,894	37,002	9,799	31,875	7,853	27,769
Sleepers and railroad ties.....	Pieces	866,404	289,473	908,097	328,277	1,049,272	356,701	801,832	232,167	564,758	197,200
Timber, square.....	Tons	21,610	129,672	1,908	22,211	684	12,146	810	13,682	870	12,722
Wood, blocks and other, for pulp.....	Cords	794,986	4,356,391	965,271	6,076,628	936,791	6,092,715	879,775	5,697,901	1,003,739	6,806,945
Other wood, unmanufactured.....	"		7,094		2,856		4,571		24,390		4,069
Total wood, unmanufactured.....			26,377,715		31,778,622		28,728,060		25,444,936		29,923,176
Wood, manufactured;—											
Barrels, empty.....	No.	37,928	12,972	36,617	45,618	34,778	49,672	39,105	37,949	33,088	41,785
Household furniture.....	"		29,404		32,486		30,494		31,555		35,435
Wood pulp,—											
Chemically prepared.....	Cwt.	670,404	1,223,702	831,331	1,597,319	716,427	1,298,162	834,483	1,585,615	1,055,390	1,995,817
Mechanically ground.....	"	2,403,629	1,841,177	3,181,507	2,577,990	4,673,922	3,796,427	3,728,141	2,834,329	3,313,950	2,580,462
Other wood manufactured.....	"		80,076		88,793		113,096		130,772		126,505
Total wood, manufactured.....			3,217,331		4,342,206		5,287,851		4,620,220		4,779,954
Total wood and mfrs. of.....			29,595,046		36,120,828		34,015,911		30,065,206		34,703,130

Trade of Quebec Province During 1913

Business Favored the Manufacturer Rather Than the Wholesaler—Montreal Shipments Show Decrease—Encouraging Outlook for 1914—The Pulp and Paper Trade

Montreal, January 26th; (Special to the Canada Lumberman).—Last year might be well called the lumber manufacturers' year, 1912 having been the wholesale dealers' year, as far as profits were concerned. Strong advances in prices occurred during the fall and winter of 1912-13, and as a result manufacturers took advantage of this when selling their 1913 cut in the early part of that period. On account of light stocks and the good demand, business was profitable during the first five or six months, especially in spruce, hemlock and the lower grades of white pine, although good pine and square timber declined in value. About midsummer there was a falling off in sales, tight money being an important factor in this connection. Dullness characterized the remainder of the year. Hemlock and spruce dealers also began to feel the keen competition of yellow pine, which was dumped in large quantities and at very low prices into Ontario, Quebec and New Brunswick. Prices were so low, in fact, that they represented a heavy loss to the manufacturers.

In spite, however, of this decline in trade, quotations of spruce, hemlock and the lower grades of white pine held up very well, which was accounted for by the heavy shrinkage in the output of the lumber referred to, in Ontario, Quebec and the lower provinces. In these provinces alone, it is estimated there was a shrinkage of 200 million feet of spruce compared with the output of 1912. There was also less hemlock manufactured than in the preceding year. The cause of this reduced output was the late and rainy fall of 1912 and the early break up of the winter in 1913, which prevented the usual number of logs being made. The snow, too, disappeared very rapidly, with the result that the streams and rivers were very low, causing poor driving and the holding up of many logs.

The strike at St. John, N.B., was also another cause of the smaller output. Then the loss of mills by fire was the worst for many seasons. These mills could not be rebuilt in time to turn out lumber during 1913, although many will be ready for operation during the present year.

The manufacturers who were fortunate to get a normal cut during 1913 had a profitable period. Although some wholesalers complain that the past year was not as satisfactory as 1912 (which was a boom period), it will compare favorably, for the wholesalers, with 1911.

The tariff legislation in the United States had some effect on business in Montreal. While legislation was pending, many shipments were held up, with a view to getting the benefit of the new schedule, and after its enactment there was a decided revival in this section of the trade.

The following expresses the views of one of the oldest wholesalers in Montreal: "Taking the provinces of Quebec and Ontario and the Maritime Provinces, last year was a satisfactory and profitable period. During midsummer there was a time of dullness in the United States, which affected our market and shipments to the United States. It also caused, for a short time, weakness in prices in some lines; but this loss was recovered towards the end of the shipping season. Stocks of both spruce and pine at the mills are lower than for many years past, and should the spring and early summer demand for dry lumber be good, there will be a further advance in prices."

Local Trade Good

The activity in building operations was reflected in the retail lumber trade, and there were few firms that did not increase their turnover as compared with 1912. The building permits, a pretty sure index of the condition of the trade, showed a gain of \$7,623,406, this being for Montreal only, not counting the outlying districts which have separate municipal government. Many of the more ambitious schemes were postponed, owing to the financial situation, and some of these will be proceeded with this year. The chief demand in Montreal is for flats and residences, a demand which is not fully met, and it is in this direction that the great consumption of lumber must be looked for during 1914. At times, it was difficult to secure certain lines of lumber, particularly of dry stock, although prices ruled high, especially for spruce, hemlock and shingles. White pine perhaps was not in quite so strong demand, in consequence of the high figure it commanded, which led to other lumber being substituted. Yellow pine and B. C. fir took its place, while hardwoods have also come more into use for interior finish.

At times, collections were rather poor, this being the one serious drawback. But easier money is looked for, and should the financial condition improve to any marked extent, there is almost certain to be a very heavy demand for lumber during the present year.

The hardwood trade was brisk throughout the year, the great feature being the demand for plain oak.

Door and sash factories were steadily employed almost throughout the year, while box factories were well supplied with orders.

The Outlook for Future Business

With regard to the present year, prospects are undoubtedly bright. There are hopes of a let-up in the money stringency, and if the cut should be as small as indications point to, the market should have a decided upward tendency. Last year, at times, the orders for dry stock were far greater than could be supplied, and if this be repeated, quotations are certain to harden. Then, too, there is likely to be a good demand from the United States as the result of the removal of the duty, so that events tend towards a satisfactory year's trade at profitable prices.

Exports Showed a Decrease

Following an increase of 5,897,544 feet in 1912, exports from the port of Montreal fell away by 3,551,595 last year. It will be seen from the following detailed statement that the decline was more than accounted for by the smaller shipments of Mr. E. H. Lemay, who is understood to have very largely decreased his exports of birch. In other respects the amounts did not vary very largely.

	1913	1912
	Ft., B.M.	Ft., B.M.
Watson & Todd, Limited	34,596,642	33,217,881
R. Cox & Company	18,326,191	17,316,113
W. & J. Sharples	13,571,128	12,943,460
J. Burstall & Company	8,905,256	9,149,894
E. M. Nicholson	7,695,305	7,670,003
Dobell, Beckett & Company	3,527,783	4,267,930
E. H. Lemay	3,522,941	8,857,349
Cox, Long & Company	1,878,741	2,211,896
Railways, steamship lines and small shippers	13,795,180	13,736,236
	105,819,167	109,370,762
Decrease, season 1913	3,551,595	
The following was the destination of the lumber:		Ft., B.M.
South Africa		4,011,701
Australia and New Zealand		264,074
Great Britain and Continent		101,543,392
		105,819,167

The year was not an eventful one in this branch of the lumber business. The high prices which ruled and the increase in freights were adverse influences, and sales in Great Britain showed a falling off. Firms on the other side hold very large stocks, and unless there is a drop in freights, the probabilities are that exports will be curtailed next season. Shipping is by no means as brisk as it was, and it is possible that with less cargo generally offering, rates may come down.

At the commencement of the past season, the shipping companies put on an additional 7s 6d per standard, but the exporters simply declined to send any cargo, on the ground that it was impossible to do business at a profit. The companies were thus forced to reduce the rates, and as a compromise knocked off 5s of the 7s 6d they attempted to impose. The action delayed shipments, which proceeded rather slowly all the summer, until near the close of navigation, when there was an unusual rush to get cargoes across. For a time, business was slightly interfered with owing to the Dublin strike.

Advices from Great Britain are not very optimistic as to next season. The great bulk of the shipments consist of white pine, and for the better grades of this lumber, and also for spruce deals, manufacturers are asking higher prices. One firm of exporters are holding off the market for certain lines, being of opinion that the prices quoted are too dear. The increase in values, of course, tends to a lower consumption, but this may be offset by lower freights. Canadian red pine continued to meet with great competition from Baltic pine.

A number of spruce deal cuts for next season have been sold at an advance on 1913 of one dollar and up per 1,000 feet.

Harbour Facilities Inadequate

Although the congestion at the docks was not bad during the past season, some Montreal shippers are of opinion that the Harbour Commissioners could make more provision for the trade. Following is the view of one of the exporters: "The Commissioners have failed

to give any facilities to unload C. P. R. cars at Windmill Point, having leased the land to the G. T., and as the Commissioners have not made arrangements to get C. P. R. cars over to this point, exporters must cart their goods from the foot of McGill street, a distance of about three-quarters of a mile at inconvenience to themselves and at a greatly increased cost. The Commissioners in their annual reports claim that they are cheapening the cost of handling freight at the Montreal docks, but what have they done for lumber exporters? Take the sheds and piers on the barbour as an instance. Instead of the exporters getting their cars placed alongside the sheds, they are compelled to hire carters to unload their cars from the different sections at considerable cost and inconvenience, losing much time in bad weather. The Commissioners' traffic department state that they are quite willing to place the cars alongside the sheds if we can get the railway companies to order the cars to the different sheds, but the sheds are too small and not equipped in an efficient manner. I believe that another storey should have been put on to the sheds, making three storeys instead of two, with the conveyors for the grain placed at the back of the sheds on the top, and with the front equipped with movable electric hoists or cranes, the same as Liverpool and other ports are equipped. The whole of the piers should also have been roofed over to protect any goods that are placed outside the shed, exposed to all kinds of weather. The dock wall running along Commissioners street should be put back to the harbour line, as it was shown in 1912 that the Commissioners had not enough trackage. This past season a different state of things existed, owing to the hay shippers shipping their products to the United States; but may not 1914 again show the want of more track room? 'Be ye always ready' is a good motto for all concerned. Suppose a lumber exporter is shipping 300 to 400 standards of deals for one steamer and the goods happen to be all rail goods, what is he up against? the exporter must allow some time to get the cars to the port; and if the steamer is delayed he has to face car demurrage, through no fault of his own. Surely some one is to blame? Either it is the Commissioners or the government who went over the plans of construction.

Further down the harbour, section 20, once alive with ocean steamers, is now deserted except for ferry steamers, and Hochelaga, once a thriving place for tramp steamers loading full cargoes of lumber the whole season through, is only used for coal boats. At Tarte Pier there is plenty of dirt and mud. The pier stood idle for some years, before it came into general use, but has not yet been paved. The sheds are too small, being only one storey high. They cannot hold half a steamer's cargo, and needless to say the lumber exporters have to put valuable lumber outside the shed exposed to the weather or else pay car rental. Steamers are becoming greater carriers every year, and larger steamers are being built for the St. Lawrence trade, and the Commissioners should be fully alive to the claims of all trades coming to the port. The grain trade is always to the front urging its wants, but the lumber business has also its claim to be considered by the Commissioners."

The Pulp and Paper Situation

The past year was one of the most important in the history of the Canadian pulp and paper trades, due to the tremendous new tonnage of news print which came on to the market through the increase in construction of mills. The quantity of new production was so large that some fear was felt lest it should seriously affect the market. The actual result, however, was that all tonnage was satisfactorily placed, in some cases it is true at somewhat lower prices, to meet conditions of general business. Naturally the mills had to seek markets outside the Dominion, and the production was largely placed in the United States, but it is interesting to note that a growing market for Canadian news has been found in South America. The sale of large quantities of Canadian news print in the United States placed manufacturers of that country in an awkward position. For a time they were almost in a panic, but they soon found that the situation was not as bad as they feared, and that there is likely to be business enough for all the machines in the United States, provided they run on paper in other lines which can be made on news machines. This is being gradually accomplished, and it is understood that one of the large syndicates will manufacture 400 tons of paper other than news print.

The tariff changed the whole aspect of news print manufacture in Canada. Under the reciprocity measure unless paper were made from farmers' lands' wood it was dutiable. In the fall the Underwood tariff admitted news print free of duty from the world without restriction. It is a question yet to be determined whether this is an unmixed blessing for the Canadian mills, because, unless good judgment is exercised mills may be constructed which would place so much paper on the market that it could not be absorbed, and it would then become a question of the survival of the fittest. It is generally recognized that this will be the situation in a comparatively short time, but it is hoped that the mills in existence who have cheap wood, power, and modern machinery will continue to find profitable

business for many years to come. The investment of capital in foolish enterprises which would tend to wreck such an important industry should be avoided.

As compared with 1912, the ground wood market last year was not satisfactory. Three mills were unable to dispose of their usual output, which was not surprising in view of the fact that about 450 tons per day of new production came upon the market. In considering the erection of pulp and paper plants in this country, the question of lumber and power have to be weighed, but the first consideration is as to whether the product can be sold this year or in the future. Undoubtedly some of the concerns floated have been over-capitalized, to the detriment of the legitimate pulp and paper enterprises of the country.

In the chemical pulp section there was a good deal of development. The explosion at one of the large mills resulted in rigid inspection of other mills by insurance companies and government officials, and the adoption of measures, at a great cost, on the safety first principle. Digesters were put out of commission in some mills and in other instances important repairs were made. A feature of the year was the installation or coming into use of new plants, such as the Wayagamack, at Three Rivers, P.Q., the Dryden, at Dryden, Ont., and the increased production of the La Tuque mill, for kraft; the enlargement of four other mills manufacturing sulphite fibre; with two new sulphite mills under construction—one in Gaspé and the other at Shawinigan Falls, P.Q. It is estimated that some 350 tons per day will be added to the production, and the completion of these plants will furnish amply sufficient capacity to cover all the demands of the Canadian market and to export a large quantity to the United States.

In fine papers, new mills at Beauharnois, St. Adele and Thorold have added very largely to this class of goods. In coarser papers business has been dull owing to over-production by one of the large mills.

Some splendid news print plants were erected during the year. These include one at Thorold by the Ontario Paper Company, one at Donnacona, by the Donnacona Paper Company, and one at Fort Frances by the Minnesota and Ontario Company.

Looking at the situation from a general viewpoint, there is a feeling that Canada, with her valuable lumber resources, and the largest water powers on the continent, has advantages which can be turned to very profitable account, and that, in the pulp and paper trades, some substantial advances will be made during the present year.

Timber Measured at Quebec

Quebec, December 31st, 1913.

The following comparative statement of timber measured and culled during 1913, 1912 and 1911 is furnished by the Supervisor of Cullers, Quebec, P.Q.

	1911	1912	1913	1913
	Cubic feet	Cubic feet	Cubic feet	No. of pieces
Waney white pine ...	836,840	1,172,720	244,280	4,517
White pine ...	10,680	1,760	7,560	261
Red pine ...	27,720	12,200	960	25
Oak ...	133,280	113,840	177,240	3,133
Elm ...	221,680	313,640	284,880	6,457
Ash ...	120	520	1,000	39
Birch ...	71,560	42,920	47,680	2,393
Total ...	1,301,880	1,657,600	763,600	16,825

In addition to the above, the 1913 returns show 83 pieces of walnut, measuring 1,320 cubic feet, and 10 pieces of hickory measuring 360 cubic feet, making the 1913 total 765,280 cubic feet.

Stocks are now much lighter than they were a year ago. We now have nothing on hand. Prices showed little variation during 1913 as compared with 1912, although the local market was rather better. The trade with the United States has been rather disappointing and the benefits expected after the removal of the tariff were largely discounted in advance. Trade with Great Britain was good until near the end of the season. We expect only a fair export trade, but a very good local trade.—J. D. & P. A. McGregor, Limited, New Glasgow, N.S.

The annual statement of the traffic of the Lachine Canal at Montreal, which connects the upper and lower St. Lawrence, shows that pulpwood and pulp for Great Lake ports was the largest tonnage up. There were 126,938 cords of the former, equal to 380,814 tons, and 13,100 tons of pulp. Two cargoes of pulp from Norway passed through the canal, totalling 2,731 tons.

Mr. T. J. Rutherford, president of William Rutherford & Sons Company, Limited, Montreal, has been elected a member of the committee of management of the Western Hospital, Montreal.

Quebec's Exports to United States

**Pulpwood, Pulp and Paper All Show Extensive Increases—
Exports Decreased—Analysis of the Trade**

The following analysis of the export trade of the province of Quebec with the United States was secured by the Canada Lumberman from the American Consular Office at Quebec, P.Q.:

The Quebec Consular District, by virtue of the annexation of the vast territory heretofore known as Ungava, and now designated as New Quebec, has become probably the largest Consular District in Canada. Roughly speaking, it is bounded on the west by the 73rd degree of longitude from the state line of Maine north to Hudson Strait, on the east by Labrador and on the south by the Gulf and River St. Lawrence and the northern boundaries of the States of Maine and New Hampshire.

This great territory, it is freely predicted, will in time become the greatest pulp and paper producing district on this continent, if not in the world. These industries are as yet in their infancy, but the vast spruce and balsam forests still available, despite the many and disastrous fires that have swept over them, are bound to develop rapidly, and to an extent hardly realized at present.

Though many of the best limits have already been secured for pulp and paper mills now in existence, there are equally good and extensive ones left, awaiting development. Numerous waterpowers, some of great magnitude, are capable of furnishing power for the largest of mills, that can be economically built, and with ready means of transportation by water and rail also at hand, besides climatic conditions which insure plenty of snow in the winter, hence a good water supply in spring, and favorable labor conditions, there is no reason why the prediction mentioned should not be realized.

That these great natural advantages of this section are being more and more appreciated by intelligent people at home and abroad, there can be but little doubt. The Government of the Province has awakened to the fact, that it is the part of an enlightened policy to make every effort to protect its public domain from devastation by fire, which has already consumed infinitely more of its forests than ever has the axe of man. Fewer fires have been the gratifying result. A more rational method of timber cutting has been enforced, and some beginning at reforestation has been made.

Pulpwood Exports Still Increasing

It has also been considered desirable to stop exportation of the raw wood from all lands over which the Crown has retained control, in order to insure its use in manufactures of pulp or paper at home, and to force, if possible, pulp and paper manufacturers elsewhere to locate in this province. This measure, however, does not seem to have had the desired effect so far, for as will be seen from a subsequent table, as much pulpwood is exported from this Province as ever, owing no doubt to the fact, that the privately owned timber lands, though a relatively small portion of the total forest area of the Province, are nevertheless capable of supplying the demand, and unquestionably will do so for a considerable number of years to come. These wood exports, nevertheless, have not retarded the development of the paper and pulp industry in the least. In fact it is perhaps far better, that these industries should have a gradual and normal growth, rather than receive a sudden impulse from adventitious conditions. The pulpwood paper industry of Quebec is bound to expand gradually, naturally yet enormously, because all conditions favor such growth. This is best illustrated by the statement of a few figures, which in this instance do not lie, because they represent values of shipments actually made and exported. Thus it appears that the exports of newsprint paper from this district represented the following values: 1905, \$640; 1906, \$8,018; 1907, \$29,228; 1908, \$44,643; 1909, —; 1910, \$173,561; 1911, \$211,618; 1912, \$270,081; 1913, \$1,059,597. To come up from practically nothing to over a million dollars in eight years, is certainly doing something, and this is but the beginning.

Pulp also shows a remarkable growth in exports, and during the same period presents the following values: 1905, \$29,704; 1906, \$22,951; 1907, \$209,538; 1908, \$230,362; 1909, \$264,558; 1910, \$765,131; 1911, \$1,273,868; 1912, \$1,807,958; 1913, \$2,256,336. divided in almost equal proportions between mechanically ground, and chemically bleached, or sulphite pulp. These figures certainly bear eloquent testimony to the growth of the pulp industry, which also is bound to continue, though perhaps not as rapidly as that of paper, which from now on will make record leaps, stimulated, as it undoubtedly will be to some extent, by the removal of the American duty, though the exports by months during 1913 since the date of the removal of the duty do not indicate an appreciated increase in the exports of either pulp or paper, on account of the removal of the duty.

It might now be gratifying to some to read, that in the face of the foregoing figures, there has been a corresponding falling off in the exports of pulpwood. This, however, has not been the case, for these exports during the same years were valued as follows: 1905, \$281,819;

1906, \$239,726; 1907, \$385,941; 1908, \$636,186; 1909, \$1,160,029; 1910, \$1,702,644; 1911, \$1,290,500; 1912, \$1,480,862; 1913, \$1,691,775; from which it appears, that the exports in 1913 almost equalled those of 1910, when the fear of an impending shortage of this wood was largely responsible for an increased exportation. The fact, that the New National Transcontinental Railroad has tapped the lower tier of counties of this province to the south of the St. Lawrence River, with great timber resources, hitherto cut off from a good market, is more likely to keep up the supply for years to come, though the wood exports generally are not on that account likely to increase in the same proportion as those of paper and pulp.

Decrease in Lumber Exports

The lumber exports on the other hand in 1913 from this district show an actual decline, small though it is. The following table will show best the relative values for the last two years of forest products including timber:

Articles	1912	1913
Balsam fir	\$4,567	\$5,038
Cedar poles	2,035	751
Deals	100,089	17,632
Laths	44,920	38,314
Lumber	1,087,386	1,063,125
Railroad ties	10,324	10,461
Shingles	848	.....
Total	\$1,250,170	\$1,135,221

From this it will be seen, that the lumber exports declined by about \$25,000 and the miscellaneous exports of forest products, aside from pulpwood, pulp and paper to the extent of nearly \$115,000. The total value of all products of the forests from this district in 1912 was \$4,817,574, out of a total of all exports of \$6,219,423 and in 1913 \$6,143,032 out of a total of exports valued at \$7,471,113. This represents an increase for the year 1913 over 1912 of \$1,325,457 in exports of forest products and of \$1,261,690 in the total values of all exports from this district.

Unique Year for the Lumber Trade

Editor Canada Lumberman: Montreal, January 12th, 1914.

The year 1913, with regard to the lumber trade, has been unique in many instances. Although money was tight and building operations decreased, the price of spruce advanced steadily; a rather strange situation, since all other commodities decreased in value. However, this is easily explained, when one considers that the lumber operations last winter were very unfavorable and the output was far below the usual production. The supply never overran the demand and manufacturers had at all times the upper hand.

This is further emphasized since spruce did not come down in price when the duty was taken off. At first, prices fluctuated but they soon settled to where they were before the tariff reductions.

Shingles suffered a reduction because the market was over supplied. This seems to be always the case with shingles. When prices are good manufacturers try to increase their usual production and soon again crowd the market. Then the mills will curtail their output or cut it out altogether and one fine day the trade finds no shingles to buy. If manufacturers always tried to be on the short side of supply, they would be able to keep prices high and steady at all times.

The demand for lumber in Canada has not been nearly as good as across the line. The last three months of 1913 were particularly poor. Tight money was the main reason for this. Retailers were forced to turn their stock into money. Necessary items only were bought, and the result today is that nearly all retailers have the lowest stock on hand they ever had, some of them have reduced it sixty per cent. This will have its good effect this year.

Dry spruce lumber this winter is very scarce. Few mills are wintering stock, but the conditions are very advantageous for the new cut and the outlook seems to indicate an over-production compared with previous years. On the other hand, money promises to be easier soon. Some expect it to be normal within a few months. With the monetary market normal, building operations will resume their activities and the demand for lumber will be stimulated. Any surplus which may be produced will be devoured by the hungry retailers, who have only pile bottoms to look at this winter.

Shingles, we expect, will be the only commodity, with perhaps lath, which will come down in price and this because mills have not curtailed this year's cut. Several new mills are starting throughout the country for the sole manufacturing of shingles. It is deplorable, but it cannot be helped.

In conclusion, with the tariff question settled for shipments across the border and with the present prospects of easier money soon, general business will brace up, lumber business will respond quickly, and 1914 will show a marked progress.—U. E. Germain, Manager, Saw-mill Owners Sales Company.

New Brunswick Output Shows Decrease

Stocks on Hand Also Below the Average—Prices Steady During 1913—Tariff Removal by U.S. Causing Important Industrial Change

St. John, N.B., January 22nd (Special to the Canada Lumberman): Outside of the city of St. John and throughout the province of New Brunswick the year just passed has been to the manufacturers and shippers of English deals one of the most successful which could be wished for. Practically from beginning to end there has been a steady market in Great Britain, with only a slight easing of prices in the early fall, which did not in any way influence the market on this side as about all the deals had been placed ahead. All the mills through the province had only a fair supply of logs. Last winter being exceedingly mild, the lumbermen were unable to get out an average cut. Hence it is felt that, when all statistics are completed, the shipment of deals to Great Britain will not be much greater than in 1912.

The prices of deals remained good all the year through. City cut deals, or deals manufactured from the large stationary mills with the most modern machinery were sold in the early spring at about \$16 to \$16.50 per M. for specifications running 50 per cent. 9 in. and up, balance 7 in. and 8 in. x 3 in., with 3 in. x 4 in.—5 in. at \$14, 3 in. x 6 in., \$14.50, 7 in. x 2½ in., \$15 to \$15.50, ends, \$12 and 4th quality, \$14. These prices were the ruling ones until about July, when a further advance took place and deals were sold at \$17 for above specifications, with a like advance in scantlings, ends and fourths. The year 1913 was a record breaker, in as far as the prices for English deals were concerned. In no year has the prices been as high or the demand any better. All the benefit of the high prices did not, by any means, go into the pockets of the manufacturers, which is usually the rule. The middleman, or broker, has in about every case gathered the cream, having had the deals practically all bought in the early season. The markets in Great Britain kept climbing and it is said that 1913 was one of the most successful years in the history of the lumber broker. We must say here, that he is many times entitled to all he gets, as he takes very heavy risks in both buying and selling.

The years which are profitable, are not so unpleasant as the years which are not profitable, of which the lumber brokers in this province have had a number. Practically all the deals throughout the province of New Brunswick are handled from the brokerage houses of Mackay, McKean and Moore, with offices at St. John and branches in Great Britain. These are all reliable houses and we hope that prosperity shall continue with them during the coming season of 1914.

The Course of Freight Rates

Freights, at the beginning of 1913, were very high. Nearly all the summer charters, which were made during the winter and early spring were made around 55 shillings, but during the summer they began to be easier, until to-day, charters for 1914 business are being made around 38 shillings and 9 pence, which the shipping brokers claim to be as low as they can be had for future business. The shippers of English deals, of course, had the benefit in some cases of the fall in freights, especially during the autumn, when a slight drop came in the prices in Great Britain and he did not feel this drop in many cases, as he had the advantage of the drop in freights.

One of the causes of the increase in shipments from St. John to Great Britain was the state of trade in the United States, which was practically at a standstill, and therefore much lumber which would have gone into the United States had to be sawn into English sizes and shipped over to Great Britain. Another factor was, that, at the time of the strike, a good quantity of deals were purchased at outside points and diverted through St. John.

As to the outlook for trade with the United Kingdom during the coming year, it is as yet impossible to see very far ahead. The stocks for shipment from the province of New Brunswick are, in some cases, lighter than at this time last year. In other sections they are about the same. On the Restigouche, about 10 millions are being wintered; on Miramichi about 10 millions; at St. John about 20 millions, which is a little more than held here last year, but northern New Brunswick is below the stock held last year by a large quantity. Only a fair cut of rotary deals is being put out along the railways and at interior water points. Many of the portable mill men did not start cutting as the buyers were hesitating during the early fall when the portable mill man has to form his plans and get into the woods. So, there will not be any over-production, so far as they are concerned. Only an average cut of logs will be taken out for the mills over the province, and if forecasts are worth anything, much of this will be turned to the United States, where it is expected that prices will increase for 1914. So, as far as New Brunswick stock is concerned, the effect it should have upon the English deal trade should not be above normal. Of course, stocks of Baltic goods are fairly heavy and may have some

effect upon the spruce trade, as they are, and have been, one of the greatest factors in keeping the prices of spruce down.

Logging Costs Advancing

So far as the cost of logging is concerned, it will be higher in 1914 than in 1913. Men have been exceedingly scarce, in fact have never been so hard to find in this section for logging purposes. Operators are paying from \$5 to \$10 per month more for men than in 1913, and it is felt that the cost of putting up the logs this year will be from 5 to 10 per cent. higher than in 1913. Although the winter has been very favourable, with the exception of the early fall, the quantity of logs put up, to date, is not as great as in 1913, caused largely by the poorer class of labor and its scarcity. No great quantity of deals will be shipped by liners, and although stocks are now very heavy in London, Glasgow and Manchester, should the consumption keep up, a large quantity will be worked off. Money, of course, is loosening up to some extent, and if trade in general should improve and no labor troubles arise in Great Britain, there is no reason to doubt that the year, or early part of the year at any rate, will bring forth good business and good prices.

As to the trade at St. John during the past year, the manufacturers have had a very discouraging season, all on account of labor asking too much and the closing of the mills for three months, when practically no work was carried on, and overhead charges were going on just the same. The operator, on closing his books for the season, finds in many cases that, if he broke even, he was very fortunate indeed. The trade started the year with a grand outlook. The plans made here for a great quantity of building would use up all the low grade material as fast as it was manufactured and at good advances in price. Also, the prices for English deals were good. A fair stock of logs had come forward or would come forward through the summer and all would be well, but a stop was put to all this when labor stepped in and said no, and all plans were turned aside, and mills closed. Lumber was brought in to the city from interior points, at good prices to the sellers. All the mills here could do was look on and see someone else benefit by what should have rightfully belonged both to employer and employee. This state of affairs went on for fully three months, and when the mills started again, the bottom had fallen flat out of the building trades, and the mills therefore received no benefits, no advance in wages was given to the operators as it was felt that the mill men were paying all the wages they could afford for some time to come, as, for the past few years, the mills have not been making any money, the result largely of the increased cost of labor.

The stock of deals here totals about 20 millions for the English market, and from 5 to 8 millions of American; laths about 5 millions. All spruce boards and low grade lumber have about been cleared up. Stocks of dry pine are very scarce, having all been shipped at the time of the strike. While quite a stock of green pine is on hand it will not be ready for shipment until about July. The market for pine is dull, with the outlook for 1914 uncertain, but the stock of pine logs will be very light.

Light Stock of Logs at St. John

The stock of logs on hand at St. John is not by any means heavy. It would total about 20 millions and these are in the hands of a very few mills. The woods operations are doing fairly well but have been handicapped very much by the wet weather of early fall and the scarcity of labor. Up to the present time only a fair quantity of logs have been put up. Good quantities of snow have fallen and hauling is now well under way. About 60 to 65 million logs are being cut for the St. John mills this winter. This is a smaller cut than usual, owing to a late start being made on account of the strike. So it is to be seen that the year 1914 will be a short season for largely all the mills in the city of St. John. About 54 millions of logs were rafted through booms in 1913, with a cut of about 15 million of bank logs below Fredericton. The sawing season was short. Quite a stock was held from 1912 to 1913, about 40 to 45 millions, which meant a cut of about 100 million in 1913, but, the mills being shut down only about 80 millions were manufactured, leaving about 20 millions held over to 1914 or less than half the stock held from 1912 to 1913.

The trade with the United States was about as unprofitable as it could be, from beginning to end of the year. The New York market was dead. It was not a question of prices, but it was almost impossible to find buyers for long lumber. Occasionally some sales were made but it was simply a hand to mouth business. Sales of random were made at about \$21 per M. for good fair specifications of lengths and widths. In New England, the market also was very uncertain.

During the early part of the season the base price was about \$25, but it only held for a short time, when it dropped to \$24 with buyers scarce. A great deal of the trouble in the American market was traced to the scarcity of money for building purposes, the banks having about withdrawn their support from the builders and refusing to advance money to buy land or build houses. This, along with the uncertainty of the tariff and its effects, with all the railroads practically out of the buying, reduced the United States market for eastern lumber to a very bad state. Laths were about the only stock that kept at good prices. They netted the manufacturers about \$3 at the mill for the whole season. Shingles were hard to sell, especially the high grades. Of course, the low grades are being used largely by the people at home, as they are much cheaper, and at present the consumer is frequently looking for something which may serve the purpose at a lower price. Large quantities of shingles are being held at the present time over New Brunswick, and throughout Maine. One of the greatest competitors which the eastern shingle is brought face to face with is the British Columbia shingle which is now coming on the market very freely since the tariff has been removed, and here let me say that one of the greatest competitors which the eastern manufacturers, both Canadian and American, will have to face in the near future will be stock from British Columbia. This applies especially to the woodworking factories, which are now buying all kinds of doors, trim and interior finish from British Columbia, bringing it right across the continent and selling it in the provinces of New Brunswick and Nova Scotia. What will happen when the Panama Canal is opened?

As to the outlook for the United States market during 1914, it is felt that it will be much better, now that the tariff questions are settled. The money question is being put on a better basis than before, and the railroads will undoubtedly be allowed to increase their rates, and if they do so, the much needed repair work will be taken up. So there is no reason why we should not at least come back to a normal market in New York and New England, with at least an advance of from \$1.50 to \$2 per M. In fact, some offers are now being made by American purchasers here, but they are not finding the sellers ready to do business as yet.

Very few changes are being made in the milling plants in this section, and no new plants are in the process of erection. No sales of deals have taken place as yet, and sellers feel that it is much better to await developments. The stock of logs will not be any more than will take care of a poor market. So if there is any business at all prices must stiffen.

North Shore Operations During 1913

The lumber shipping season during 1913 on the North Shore of New Brunswick was an active one, many of the ports showing a good increase. Among these the following totals show the results of the year's operations:—

Year	Dalhousie		
	Vessels	Tonnage	Sup. Feet
1912	33	43,324	15,909,671
1913	41	52,258	16,000,000
Year	Bathurst		
	Vessels	Tonnage	Sup. Feet
1912	10	11,319	7,615,378
1913	10	11,319	7,615,378
Year	Newcastle		
	Vessels	Tonnage	Sup. Feet
1912	20	24,898	33,494,529
1913	16	15,056	22,103,758
Year	Chatham		
	Vessels	Tonnage	Sup. Feet
1912	31	32,243	45,623,040
1913	22	36,580	52,384,955
Year	Richibucto		
	Vessels	Tonnage	Sup. Feet
1912	3	2,672	1,594,990
1913	3	2,672	1,594,990
Year	Buctouche		
	Vessels	Tonnage	Sup. Feet
1912	1	246	287,556
1913	1	246	287,556
Year	Campbellton (British Ports only)		
	Vessels	Tonnage	Sup. Feet
1912	19	30,047	35,152,226
1913	26	39,556	54,351,943

Sixteen professional trained foresters, nearly all of whom secured their training at the forest school at Laval University, Quebec, are now employed in the Forest Service of Quebec province. During the summer of 1913, the Forest Service had fourteen parties in the field, each in charge of a technically trained forester. Ten of these parties were engaged in valuing unlicensed Crown timber lands, of which there are approximately 125,000 square miles in the province. The Crown lands under license totalled approximately 70,000 square miles. During recent years, the revenue from these lands has been about \$1,750,000 annually. Four parties were also engaged last year in an

examination of licensed lands, to determine the boundaries of permanent forest reserves. The Quebec government is working out a policy of segregating non-agricultural forest lands into permanent forest reserves.

St. John Shipments Showed Increase

The annual review of the lumber shipping trade of St. John, N.B. with trans-Atlantic ports, published by the Daily Telegraph, states that these shipments were fairly heavy and showed an increase over 1912. During 1913, 155 vessels loaded lumber at St. John and the cargoes totalled 86,538,622 superficial feet; while in 1912, 161 vessels loaded 82,040,963 superficial feet—an increase of 4,497,659 feet for last year, although there was a decrease of six in the number of vessels. Timber shipments for the year 1913 show a slight reduction. The decrease in sailings is principally due to the fact that there were ten more Liverpool boats and five Australian boats during the previous year.

The following table shows the comparative shipments during 1913 and 1912 to the various trans-Atlantic ports:

	No. of Vessels	Tons	Deals, S. Ft.
Liverpool, 1912	43	279,103	19,178,393
Liverpool, 1913	33	217,214	16,885,275
Manchester, 1912	223	57,966	25,832,652
Manchester, 1913	26	71,606	21,218,201
London, 1912	47	159,341	14,725,768
London, 1913	50	174,472	15,273,694
Glasgow, 1912	19	62,395	3,899,740
Glasgow, 1913	18	85,393	10,161,757
Sharpness, 1912	2	4,702	3,693,560
Sharpness, 1913	2	4,702	3,693,560
Cardiff, 1912	1	1,937	322,050
Cardiff, 1913	1	1,937	322,050
Newport, 1912	1	2,470	2,925,286
Newport, 1913	1	2,470	2,925,286
Swansea, 1912	2	2,987	2,690,420
Swansea, 1913	2	2,987	2,690,420
Barrow, 1912	1	2,248	2,802,336
Barrow, 1913	1	2,248	2,802,336
Preston, 1912	1	684	842,173
Preston, 1913	1	684	842,173
Cork, 1912	1	1,560	1,983,231
Cork, 1913	1	1,560	1,983,231
Dublin, 1912	4	8,171	1,403,083
Dublin, 1913	5	108,428	3,559,565
Belfast, 1912	5	9,337	4,324,142
Belfast, 1913	5	11,067	3,240,621
Youghal, 1912	1	440	384,563
Youghal, 1913	1	440	384,563
Kilrush, 1912	2	706	769,542
Coleraine, 1912	1	246	274,823
Coleraine, 1913	1	154	192,024
Sligo, 1913	1	573	735,305
C. Castle, 1912	1	186	200,040
C. Castle, 1913	1	180	179,624
West Port, 1912	1	115	257,133
West Port, 1913	1	115	257,133
Fownes, 1912	1	1,252	1,621,240
Fownes, 1913	1	1,252	1,621,240
Kenmare, 1912	1	185	183,165
Kenmare, 1913	1	185	183,165
Galway, 1912	1	797	1,020,764
Galway, 1913	1	797	1,020,764
South Africa, 1912	5	14,770	1,002,731
South Africa, 1913	7	19,568	2,823,137
Australia, 1912	5	19,508	3,042,647
Australia, 1913	5	19,508	3,042,647

BY WHOM SHIPPED

Shippers	1912			1913		
	H'dwoods	Spruce	Timb.	H'dwoods	Spruce	Timb.
W. Malcolm Mackay	1,773,864	28,175,348	949	1,582,480	32,668,873	554
J. E. Moore & Co., Ltd.	452,739	27,800,058	351	415,403	22,868,067	18
Geo. McKean	1,530,609	13,813,571	1,002	2,367,609	17,943,693	1,711
Other shippers	1,437,025	7,057,749	28	1,458,269	7,234,228	24
Total	5,194,237	76,846,726	2,330	5,823,761	80,714,861	2,307

Shipments from the port of Dalhousie were:
Forty-one vessels, 52,258 tons; 16,000,000 superficial feet of deals, etc., 33,000 cords pulpwood; 8,000,000 laths; 2,500,000 shingles.

Shipments to the United States

More than a million and a half dollars worth of lumber was shipped from St. John to ports in the United States during 1913. The quantity exported during the first quarter was considerably smaller than during the other quarters. The long lumber shipped amounted approximately to 45,486,000 feet, while the shipments of laths and shingles totalled about 113,155,000 and 8,248,000 respectively. The values of the different kinds of wood products shipped during the year, as furnished by the U. S. Consul's office, were as follows:—

Product	Jan.-Mar.	Apr.-June	July-Sept.	Oct.-Dec.
Lumber	\$159,717.89	\$198,789.59	\$259,712.29	\$155,058.54
Wood Pulp	89,482.09	70,794.41	62,812.44	105,097.56
Shingles	982.50	13,743.62	.....	6,748.50
Laths	35,921.75	140,912.17	52,094.61	65,354.23
Pulp Wood	8,500.00	26,105.01	24,872.54	25,397.50
Ships' Knees	1,271.80	463.50	348.50	948.15
Box Shooks	123.50	.....	.....	.....
Barrel Shooks	606.69	.....	.....	.....
Telegraph Poles	377.31	812.00	2,067.30	.....
Pine Boards	555.81	1,362.42	2,717.59	10,773.44
Staves	.....	315.39	1,022.13	.....
Track Ties	.....	134.50	.....	762.42
Total	\$297,539.34	\$453,432.61	\$405,647.40	\$370,140.34
Grand total for year	\$1,526,759.69			

St. John Trade's Markets Not Promising

A St. John, N.B., correspondent, writing to the Canada Lumberman says:—

In the early spring of 1913 prices were obtained that were higher than for many years past, although the prevailing high rate of freight reduced the f.o.b. value of the lumber. Then, later on in the season, when the English market had slumped, freights took a turn upwards, but only temporarily. At the very end of the season, freights were much below those of any other time during the year. The production last year was moderate, owing to the poor hauling conditions and the short season, but the manufacturers undoubtedly had a prosperous year, as they all sold their stocks at good paying prices.

The United States market was exceedingly disappointing. Early in the spring everything pointed to good business, but owing to money stringency, and pending United States legislation, the market disappeared entirely.

We are having good seasonable winter weather here so far, with sufficient snow to make good fair hauling, and if these conditions continue, the production will, perhaps, exceed last year's.

As to this coming season's market, it is quite impossible to say anything at present. The large United States handlers of spruce apparently have little faith in any volume of business. In the United Kingdom, as usual at this season of the year, business is very quiet, and buyers are hard to be found for the small parcels going forward by liners, and prices for the spring and summer, will undoubtedly be very much lower than last year.

A Manufacturer's Review of New Brunswick Trade

Editor Canada Lumberman: Bathurst Village, N.B., Jan 17th.

The lumber trade in New Brunswick is not as active as it was twelve months ago. We are affected here, much the same as in other parts of the world, by the general tightness of the money market. This has interfered seriously with all kinds of development and consequently there has been a slackening down all along the line. This will ultimately work out for our general good, as there was no doubt at all that the pace was a little too fast, and at least some doubtful enterprises were being launched, which were better deferred. On the whole, however, trade for 1913 was satisfactory except, of course, that collections were not as good as in 1912, but this is now coming all right.

The cut of lumber falls considerably under that of 1912 and much below the average for the past few years. The stocks on hand are considerably less than usual and most of what is on hand has been sold by the manufacturers to the wholesalers and is now in process of being shipped out. This, of course, refers to mills situated so as to ship their lumber out by rail. Mills that can only ship by water cannot load out their remaining stocks until navigation opens up next spring. With anything like an ordinary demand there will be practically nothing left on the yards by the time the sawing season opens up next spring. Prices have ruled steady throughout the year, which is remarkable in view of the general slackness in most lines of trade. The short cut, of course, influenced this, and further, the removal of the American duty was a great boon to the Canadian lumber trade in general and especially so for the Maritime Provinces. This affects not only the lumber trade but also benefits every line of trade and industry. Many of the old time saw mills built for making 3 inch. deals for the British markets are being replaced by more modern plants adapted for sawing for the American trade. The time is not far distant when the marking of 3 in. deals in this part of the world will be a thing of the past, unless a very radical improvement is made in British prices, and this does not seem likely. The result is bound to be that all badly located mills will go out of business shortly unless they can modernize and locate where they can ship by rail as well as water.

The Timber Lease Situation

One very important matter affecting all lumbermen in New Brunswick, settled during 1913, is the matter of the Crown Land leases, which expire in 1918. The provincial government enacted a law permitting all holders of leases to renew their licenses for another term and as practically all holders have accepted the terms, it must be taken for granted that the law is, at least fairly satisfactory to them.

So far as conditions for 1914 are concerned, it is a little too early yet to say much as to how the markets may rule. There is no doubt at all that money is easing and confidence generally is being restored. If this continues for another thirty days or so, trade will begin to improve and we will very soon be back again doing business full swing. Basic conditions are sound and with anything like normal money rates, we should have a good year's trade. Businessmen generally are optimistic and they have every confidence in the outlook. The opening of the American markets for so many of our products is bound to have a great influence on all Maritime trade, owing to our proximity to these markets.

The present federal government of Canada is greatly improving

and extending the harbor facilities at important shipping points in the Maritime Provinces and showing a great interest in our shipping trade. At Halifax and St. John, tremendous developments are taking place in the building of piers and wharves and in dredging, and at Bathurst very important dredging work is in progress, which, when completed, will make Bathurst a splendid harbor. Ocean going vessels, both steam and sail, will take full cargoes from this port to any part of the world. Large pulp and paper plants are locating there and these improvements are absolutely necessary for the business of the place.

Lumbering conditions to secure the new logs for 1914 sawing have been quite favorable up to the present, and indications are that the cut will be larger than in 1913. Practically all the new logs are now cut and yarded, and the hauling off work is in progress. Hundreds of men and teams are busy drawing the logs out of the woods all through the province, and placing them on the rivers where they will remain until the spring freshets float them down to the mills where the sawing is done between the 1st of May and 1st of December. A great deal depends upon the success of our drives in this country, so far as the cost of the logs delivered at the mills is concerned. During the past two years, conditions were unfavorable and the drives very expensive. We are hoping for better things this year on the driving end.—Angus McLean.

New Brunswick Trade Conditions

A prominent New Brunswick manufacturer, discussing trade conditions during 1913, states that the volume of the lumber trade was less than during 1912, but that prices were somewhat better. Stocks on hand at present are not over a quarter of what they were a year ago. The markets for shingles and lath during 1913 were better than they have been for years. The export trade with the United States was quiet during the early summer, but improved when the duty was removed. In connection with the export trade to Great Britain, freight rates opened high during 1913 and the quantity exported was less than formerly. Prices on the British market, started out, based very largely on the same f.o.b. value as in 1912. Later in the season freight rates eased off giving shippers from New Brunswick something of the benefit. New Brunswick shippers are the speculators in the trade market and in this instance derived the benefit. It more frequently happens that they are the losers on account of the advancing freight rates instead of the gainers.

Contracting for 1914 stocks has hardly commenced as yet. British buyers are talking about lower prices and United States and Upper Canadian buyers report that trade is dull and the future uncertain. The quantity of logs being taken out in New Brunswick this winter will show a reduction and the cost of production will be from \$1 to \$1.50 per thousand more than it was last year, as a result of increased wages for the men and increased cost of provisions. The writer believes that the markets will respond to this additional cost.

Partington Company's Operations

Lumbering conditions in the Province of New Brunswick are excellent at the present time, according to Mr. Sydney M. Jones, of the Partington Pulp & Paper Company, St. John, N.B. The cut of the Partington Company will be smaller, owing to the fact that there was a two years' supply on hand last year. The cut this year will be less than half the usual amount. The plant consumes about 18,000,000 feet of pulp wood in the manufacture of its product each year. A new spur track from the Canadian Pacific Railway to the mill has just been completed and is about a quarter of a mile long. Heretofore the company has used automobiles for transporting the pulp over this distance to the cars, but now that will be done away with. There has also been a new storehouse erected, which is 150 feet long and 35 feet wide. A conveyor connects the mill with the loading platforms at the storehouse.

The receipts for 1913 from the lease of New Brunswick timber limits and from stumpage amounted to \$501,554.05. This is about \$20,000 less than the receipts in 1912 and \$27,000 less than in 1911; but the falling off was due to a reduced cut of logs because of dull markets. The growth of revenue from the crown lands is indicated by the fact that the total receipts in 1890 were only \$140,291; in 1895, \$151,263; in 1900, \$175,818; and in 1908, \$343,291. This year's receipts, in addition to the \$501,000 for stumpage included also \$255,335.76 in bonuses on timber leases being renewed for a new term of years.

The export trade to the United States showed lower prices during 1913 than in the previous year, but after the removal of the duty, results were equally as good as in the former year. The volume of trade during 1913 was greater and profits and prices were better than in 1912. Stocks are now about the same as a year ago. Favorable conditions have prevailed in the markets for shingles and lath. The export trade to Great Britain has shown no change. The outlook for 1914 trade is fair.—W. W. H. Miller Company, Ltd., Campbellton, N.B.

Nova Scotia Lumber Trade During 1913

Home Market Steadily Increasing—Prospects for Present Year Still in Doubt—Shipments from Parrsboro, Windsor, Liverpool and Other Important Ports

It is not an easy matter to get accurate figures concerning the lumber output of Nova Scotia. The large shippers, of course, keep correct account of the quantities they handle, and their figures are easily available for statistical purposes, but there are many small operators who are more interested in getting out all the logs they can "while the sledding lasts" than they are in keeping a record of the exact number of feet in their winter's cut. This being the case, it becomes necessary for those who prepare lumber statistics to estimate a portion of this output, and, no matter how well qualified they may be to estimate correctly, experience has shown that they are as likely to disagree as the proverbial doctors. For instance, one gentleman, who should be an authority, as he is Deputy Crown Land Commissioner, estimates the cut of last year at "about 450,000,000 feet," which, he says, is "a decrease of 50,000,000 feet on the cut of 1912." He also says that "for many years the annual timber cut has been in the vicinity of 500,000,000 feet." Another gentleman, who should also be an authority on the subject, estimates "that the lumber cut of this province for 1913 would total about four hundred million feet, which is a fairly average cut." It will be seen that one of these estimators not only places the cut of last year about fifty million feet below the figures given by the other, but also reduces the annual cut of the province about a hundred million feet below the estimate first quoted. This wide divergence, which has a tendency to lessen the value of the estimates, may possibly be explained by the use of different standards in reaching the conclusions, but it is probable that both authorities were too conservative in their calculations, and that they failed to make sufficient account of the vast and rapidly increasing quantities of lumber used every year for pit timber, railway ties and barrel shooks.

The estimates of the value of the lumber output differ much more widely than those concerning its quantity. The valuations of last year's cut, as published in the provincial papers, range from \$1,800,000 to \$6,000,000. The first of these estimates is simply ridiculous. Assuming that the total output is four hundred million feet, which is the lowest estimate, the price, according to that showing, would be only \$4.50 per thousand feet. The price of lumber last season would probably average about three times that amount, and some grades were quoted in the early summer at \$18.00 per thousand, f.o.b. Some manufacturers of statistics are evidently poor guessers.

Presumably the records of all lumber shipments are kept at the custom houses of the various ports, and it should not be difficult to obtain correct returns. It would seem, however, that some newspapers prefer to deal in generalities rather than take the trouble to collect definite statements of fact. The result is a large amount of guess work and very little reliable information.

Shipments From Port of Parrsboro

The shipments of deals, scantlings and battens from Parrsboro to the United Kingdom last season totalled 18,186,656 superficial feet, valued at \$278,910. The corresponding shipments in 1912 amounted to 17,578,550 feet, valued at \$233,621. The exports of spruce and hemlock boards and scantlings to the United States amounted to 8,130,071 feet, valued at \$122,895. The figures in 1912 were 16,511,762 feet, valued at \$214,077. This big falling off was due in part to the slump in prices in the American market, and in part to the lack of water last spring, which left many logs in the woods. The laths exported this year numbered 5,043,800, with a valuation of \$11,269. The pieces of piling exported numbered 38,353, valued at \$69,871. The total valuation of the lumber shipped from Parrsboro last year was \$482,945. This, however, does not include the output of the Jeffers Manufacturing Company which consists of barrel shooks, dimension lumber and shingles. Nor does it cover all lumber shipments from Cumberland County, for about twenty million feet of deals went from Pugwash, on Northumberland Strait, to the British market, and large quantities were shipped by rail from the eastern part of the county.

The output of Hants County is placed at 42,500,000 feet. The shipments from Windsor, Hantsport and several other ports amounted to 29,000,000 feet. Shipments by rail totalled 7,500,000 feet, and included 3,000,000 feet shipped to Hudson Bay, via Halifax, while 6,000,000 feet will be held over.

Lumbering is an important industry in Queen's County, and Liverpool is one of the busiest ports of the province, but the only information available concerning last year's output is that it was "fully up to the average." Probably few remember what the average was, or is, but it should be large, for there are many operators in the county. One concern—the Davison Lumber Company—starts the

new year with seventeen camps, employs nine hundred men, and has 250 horses and oxen. The county also has a pulp and paper mills, which, like some others in the province, are said to be doing a prosperous business.

Large shipments are made from Annapolis and Digby Counties to South America and the West Indies as well as to the United States. Pictou County has four firms which cut about four millions each, and also has a number of smaller operators. Colchester County has a number of successful lumbermen, but the greater part of their output is shipped by rail. Nearly all the cut of Cape Breton is required at home in the mines and in the rapidly growing cities and towns. Halifax County ships the most lumber, but is not the largest producer.

Outlook For the Present Year

Prospects for the coming season are not considered very favorable, but there is always a chance that things may turn out better than expected. The home market is steadily increasing, and is likely to reach pretty large dimensions. It is quite possible that the opening of the Panama Canal may, in time, bring new competitors, but Nova Scotia will always have the advantage of her comparative nearness to the markets of the United Kingdom and the Eastern States. The demand for barrels for the shipment of apples and potatoes is increasing very rapidly, and this new branch of the lumber industry bids fair to assume large proportions, and will have the advantage of utilizing material unsuited for the manufacturer of merchantable lumber.

Lumbering, although by no means one of our largest industries, has always been of great importance to a large number of our people. It affords employment at a time when little or nothing is being done in some other lines of work, and it puts large sums of money in circulation at a time when it is much needed. It furnishes cargoes for our ships and freight for our railways, giving additional employment at every turn; and, best of all, the marvellous recuperative power of our forest heritage prevents any danger of it ever becoming a lost or exhausted industry, so long as reasonable care and judgment are used. Providence evidently intended that lumbering should be a permanent industry in this province, for a recent survey has demonstrated that fully two-thirds of its area are suitable only for timber growing, while the natural reproduction which usually follows lumbering operations practically makes our forest wealth a permanent asset.—Elihu Woodworth.

Hants County Lumber Shipments

Details of the shipments of lumber during 1913 from Hants County, N.S., not including stock cut along the I. C. R., shipped to Shubenacadie and Milford, etc., are as follows:—

Place of Shipment	Shipped	On hand
Windsor	10,000,000	2,000,000
Hantsport	3,000,000	1,000,000
Walton	3,000,000	2,000,000
Noel, Maitland, Selma, etc.	11,000,000	1,000,000
Total	27,000,000	6,000,000
Shipped by rail to United States..	1,500,000	
Railed to Halifax for shipment to U. S. and Great Britain and Hudson Bay	6,000,000	
Local consumption	4,000,000	
Total	38,500,000	
On Hand	6,000,000	
Total cut	42,500,000.	

Stocks are much lower than they were a year ago, being less than 50 per cent. of the former total. Good average export trade has prevailed with the United States, but most of our business is done locally. The prices we received during 1913 were the highest we have obtained. The outlook for 1914 is quite good. Thirty years ago Great Britain and the British West Indies took all our export. During 1913 we did not send them anything. Any offers we got for lumber or ground wood pulp were only at ruinous prices. The Dominion Government have removed Weymouth bar, opening a channel to accommodate ships of any size. One of the reasons why we do not ship to the English markets is that our harbor is open to all shipping the year around.—Campbell Lumber Company, Limited, Weymouth, N.S.

Nova Scotia's Trade Felt the Depression

A prominent lumber merchant of Halifax reviewing the market conditions of Nova Scotia during 1913, writes as follows:—Late last winter and early spring the market in the United States was inordinately high, or as it can be described, "away up in the air." The American commission merchants offered fabulous prices and the local people had to follow suit. The first thing that followed was the money stringency, and then the inevitable bad times, after which the New York market went to pieces, forcing prices away down. There was a clear drop at one time of from five to seven dollars a thousand in some cases. To make matters worse, small schooners, by which we generally ship lumber, were scarce, and freights high, all of which operated against us. Schooners found more profitable employment elsewhere, such as in fishing, etc. As a consequence the American market has remained depressed ever since and the outlook for next year is not any too encouraging. Prices for winter and early spring shipments will be at some considerable advance over those that prevailed during the past season. In the spring and summer the prices will probably decline again. Southern pitch-pine is selling on the American market today at less than the cost of production, and one of my firms writes me to say that he is surprised that spruce and hemlock have held up as well as they have.

Fortunately, to offset the conditions of the American market, the winter, spring and summer trade was good in England and prices were extremely high. Things were booming in the Old Country, but late last fall, owing to strikes, the tightness of the money market and bad times generally in the United Kingdom, spruce deals dropped one pound per standard, and the prices ruling at the present time are considerably lower than they have been for the past year. Lately there was one bad failure in the lumber trade of Liverpool. "Things look pretty tricky for 1914, with dangerous times ahead," was what one man wrote me. These exceptionally good times of recent years which Great Britain has enjoyed are causing a reaction in some quarters, and the lumber trade is feeling it. This reaction is sure to be felt in Canada under present conditions.

Hardwood in England is as low as it can be, in fact lower than spruce, which is almost at the lowest limit of the market.

For a number of years the annual timber cut has been in the vicinity of 500,000,000 feet, 400,000,000 feet for export trade and 100,000,000 feet for the home trade. This year it is estimated that the cut will only be about 450,000,000 feet, or a decrease of 50,000,000 feet on the cut of 1912. The causes of this decrease are many. Some have arisen during the year. The stringency in money has tended to curtail operations of some of our larger lumber firms. The lack of suitable timber lands, has reduced the output to some extent. And lastly, a number of small operators have gone out of business, either because they could not get the land or else were bought out by the larger firms.

The year 1913 has seen a good number of forest fires, and a large acreage of forest land destroyed. No accurate figures are at hand as to the number of acres burned, nor as to the value of the standing timber destroyed, but from general reports received, the losses have been heavy. Lunenburg County seems to have suffered most through forest fires, and perhaps the least affected was Pictou County. The amount of money expended by the various municipalities and the Provincial Government to prevent forest fires was \$9,000.

Nova Scotia Trade Review in Brief

Good prices prevailed in the English and United States markets for Nova Scotia lumber at the beginning of the year 1913, says an exchange. Ordinary spruce specifications for the United States sold at \$16 to \$18 f.o.b. vessel at shipping point. Hemlock scantling and boards brought \$14 to \$16. Laths were selling at \$3 per thousand. Spruce deals for England brought as high as \$18 per thousand feet f.o.b. steamer at Halifax. These prices continued fairly steadily until the month of June. In June and July the United States markets fell off rapidly until the price for spruce was from \$4 to \$5 lower. The demand for hemlock boards, however, continued and the price held at about \$14. The demand for lumber for local consumption in Nova Scotia was good throughout the year and quite a quantity was sent to Hudson Bay for construction work, some three million feet alone being shipped to that point from Hants County.

Prosperity Prevails at Bridgewater, N. S.

A special article dealing with the lumbering industry at Bridgewater, N.S., published in a recent issue of the Halifax Morning Chronicle, contained the following:—While money has been tight in the Upper Provinces, our lumbermen found no difficulty in obtaining all the money they wanted to operate their plants. It is safe to say that more lumber was moved this year than in any former year in the lumbering trade. Old stocks that had been piled up for some time were moved off, and turned into money, and everything pretty well cleaned up for the year 1914. Some difficulty was experienced at

the beginning of the season in securing the proper sized tonnage for removing stock, but eventually what was available was used, and the River LaHave was a busy hive of industry, and the loading wharves literally a sea of masts. The present low condition of stock is generally conceded as an omen of unsurpassed energy in lumbering circles.

The outlook for next year's business is good, prices promise to be higher, and they cannot afford to drop, on account of the increased cost of logging, manufacture and freight. The Davison Lumber Co. began the present season with seventeen camps, comprising nine hundred men, and two hundred and fifty horses and oxen. The lumbering industry in this part of Nova Scotia is flourishing. The demand for lumber shows no diminution, and the year 1914 promises to be very successful.

Nova Scotia's Unique Position

In taking a general view of the lumbering situation in Nova Scotia for the year 1913, there are several points to be noted and while they are not very prominent as yet still they can be taken as indicating the trend of conditions that are developing, writes J. B. Whitman, Deputy Crown Lands Commissioner for Nova Scotia, in the Halifax Chronicle. Lumbering has been one of the fixed staple industries of the province for some years but conditions have changed very materially and signs are not lacking that still further and important changes will occur. Within comparatively few years prices for about all grades have shown a very marked advance but operating expenses have fully kept pace with receipts in the rising scale. In all the industrial trades in Nova Scotia, except perhaps in the mining of coal, there is none that has been of more real and substantial benefit to the great majority of the people than lumbering. It has meant the distribution annually of about six million of dollars of money which was earned when many other industries were either slack or at a standstill. The story that 1913 tells us is that our forests are not to be treated as a matter of course but must be taken as a great national asset of marvellous and increasing economic value.

Nova Scotia has, during the past years, had a world-wide market for her lumber product without having any competitor enjoying the same shipping facilities. One of the results of such easy shipping facilities and world-wide markets has been the cutting and marketing of timber that was not mature for present profits looked better than future ones notwithstanding future ones might be very much larger. The present outlook for export lumber is not very encouraging as prices have declined and stocks are fairly plentiful both in the Old Country and the United States. The best feature of the whole situation is the increased demand with good prices for domestic consumption. There is a steady and growing market in this direction, a market and demand that is increasing year by year and it is up to Nova Scotians to see that their own forests are made to produce as much as possible of what is required for domestic use.

The Eastern Provinces of Canada have had practically a monopoly of the Atlantic markets, but there can be no question of doubt that the linking of the two great oceans is going to establish a new order of things. Eastern Canada lumbermen are going to realize in the very near future that they have a competitor for the sale of their product in the great markets of the Atlantic, a competitor that has immense sources to draw from, sources in comparison of which the forests of Nova Scotia sink into insignificance. Easy accessibility and unsurpassed shipping facilities render the position of Nova Scotia almost unique and it only remains for Nova Scotia timber owners to cease from trying to get as much land as possible, but to develop and cultivate reasonable areas for the time is here when timber areas require cultivation and care the same as any other crop and the year 1913 has contributed its lesson to teach us these facts.

Lumbering in Antigonish County, N.S., received quite an impetus recently on account of the arrival of the Colonial Lumber Company, a Boston concern of which the local manager at Antigonish is Walter F. Dixon. This company has bought a large number of lumber lots throughout Antigonish County. It has cleared up several of the rivers converging at or near the town and is erecting a large mill below the town of Antigonish. The company intend to devote special attention to the manufacture of hardwoods.

We are naturally optimists. Our view is that if the money stringency passes during the next three months and building operations are resumed in the United States, creating a normal demand, prices will be on a paying basis. Our volume of trade during 1913 was greater than during 1912. Profits were fully equal to those of the previous year and prices showed little alteration. Stocks are now smaller than a year ago. There has been a good demand for shingles and lath and prices have been good. The export trade to the United States was very bad after June. As stocks are now small we ought to get fair prices with a normal demand.—Clarke Bros., Limited, Bear River, N.S.

British Columbia Needs Curtailment

Reduction of Lumber Output During 1913 only 35 per cent. of Reduction in Consumption—
Per Capita Requirement Likely to Diminish in Future

THE annual meeting of the Mountain Lumber Manufacturers' Association was held at Nelson, B.C., on January 12th and was chiefly important on account of the very complete analysis of trade conditions contained in the annual reports of the president and secretary. The attendance at the meeting included the following:—W. A. Anstie, Forest Mills of British Columbia, Revelstoke, B.C.; George E. Quance, Quance Lumber Company, Nakusp, B.C.; H. H. Ross, Ross-Saskatoon Lumber Company, Waldo, B.C.; E. L. Staples, Otis Staples Lumber Company, Wycliffe, B.C.; J. P. McGoldrick, B. W. Sawyer, Walter F. Lammers, Adams River Lumber Company, Chase, B.C.; A. G. Lambert, A. G. Lambert Company, Nelson, B.C.; W. C. E. Koch, Koch's Siding, B.C.; J. S. Deschamps, Rossland, B.C.; G. R. Lawrence, Forest Mills of British Columbia, Revelstoke, B.C.; C. D. McNab, Baker Lumber Company, Waldo, B.C.; C. M. Pennock, Crow's Nest Pass Lumber Company, Wardner, B.C.; A. K. Leitch, East Kootenay Lumber Company, Jaffray, B.C.; W. Mark DeCew, Western Pine Lumber Company, Grand Forks, B.C.; O. I. Archibald, Kootenay Shingle Company, Salmo, B.C.; Fred C. Robinson, Western Canada Timber Company, Gerrard, B.C., and the Summit Lake Lumber Company, Summit Lake, B.C.; Charles O. Rodgers, Canyon City Lumber Company, Creston, B.C.; T. S. Richardson and A. E. Johnson, British-Canadian Lumber Corporation, Crescent Valley, B.C., and A. E. Frank, Secretary-Treasurer, Mountain Lumber Manufacturers' Association, Calgary, Alta.

The president, Mr. W. A. Anstie, in his annual address said:—It is not my intention to refer at any length to the work of your association since the last annual meeting, as I regard this as the special province of the secretary, who no doubt will deal with this question exhaustively. 1913 has proven possibly the worst of a succession of disappointingly unprofitable years for the lumber industry of the mountains, the principal causes for which are still fresh in our minds. Apart entirely from the fact that the world-wide financial conditions have been so stringent as to result in a tremendous check to the rapid development of western Canadian cities and towns, it has been forced upon the conviction of all observant lumbermen that the industry has been over-exploited to an unfortunate extent; so much so that it has been said with certain truth that the chief reason for the unsatisfactory state of the lumber trade of British Columbia is the over-producing capacity of our saw mills, which is out of all proportion to the existing market facilities. In this connection it will be of interest to consider the relation of producing capacity to the consumption of previous years; bearing in mind that we enjoy practically no tariff protection against American lumber and have been, and will continue to be, for years subject to the inroads of enormous quantities of low-grade lumber from the States of Washington, Oregon, Idaho and Montana, where over-production exists to even a worse extent than in British Columbia. The following table illustrates the condition very clearly:

Annual producing capacity mountain mills ... 1,000,000,000 ft.
Annual producing capacity coast mills ... 1,600,000,000 ft.
Annual producing capacity pine and spruce mills ... 600,000,000 ft.

Total annual producing capacity ... 3,200,000,000 ft.
During the year 1912 the consumption of lumber in the four western provinces of Canada, which constitute the present market for 95 per cent. of the production of the mills just mentioned was as follows:

1912 sales mountain mills (less than 50 per cent. of actual capacity) ... 488,000,000
1912 sales coast mills (less than 60 per cent. of actual capacity) ... 935,000,000
1912 sales pine and spruce mills ... 404,000,000
1,827,000,000
1912 sales American mills in four western provinces of Canada ... 300,000,000

Total consumption of four western provinces ... 2,127,000,000

Trade Conditions Analyzed

It should be recalled here that the year 1912 provided the largest consumption of lumber ever experienced in western Canada, and the per capita consumption established what I believe to be the world's record. I mention this fact because signs are not wanting that our per capita consumption of lumber, which has been abnormally large, will decrease from this time on, and we shall sink to about the level of the western and middle-western States. The majority of our prairie cities and towns have been over-built, and for a few years at any rate will be

forced to go very slowly in the matter of future extensions. We shall witness a change from past conditions where we have been accustomed to seeing the largest proportion of our shipments going into city and town buildings, and will have to depend more on the country trade. The removal of the American tariff will bring us at once a small additional outlet for upper grades of lumber, but on the great bulk of our product we cannot hope for any market in the United States for some years to come. Looking into the immediate future it is difficult to see where we can hope for any marked improvement, or any prospect of placing our business upon a permanent plane of prosperity; but I do feel strongly, that upon the degree of judgment displayed by the manufacturers of this country in regulating production, will depend largely the amount of success that will attend their labors. It would be idle, of course, to lay all the blame for our unsatisfactory conditions at the door of over-production, but I emphasized this phase of the situation because I believe it admits of certain improvement if we exercise intelligence and co-operation in dealing with the problem. We are suffering from a combination of unfavorable circumstances in this business, which I should enumerate in the following order:

1st. Over-production of our plants.

2nd. Lack of tariff protection upon our product, while forced to pay for all machinery and supplies entering into the cost of our production, upon a high-tariff basis.

3rd. The excessive carrying charges and taxation our provincial government demands for the low-grade and thinly timbered licenses of the mountains.

The president referred briefly to the financial condition of the association affairs, and—while no large balance remains in the treasury—commended the conduct of this fund. He recommended that some action be taken regarding a grading inspection bureau, stating that it is most desirable to have such a department in connection with the association work.

Trade Returns For Three Years

Mr. A. E. Frank, acting secretary, presented his report, which contained the following interesting reference to operations during the last three years:

Manufactured	1911	1912	1913
Mountain mills ...	462,778,494	420,176,434	385,828,521
Coast mills ...	739,000,000	910,000,000	820,000,000
Pine mills ...	180,000,000	150,000,000	140,000,000
Spruce mills ...	192,000,000	198,000,000	170,000,000
Total manufactured	1,573,778,494	1,678,176,434	1,515,828,521
Shipments			
Mountain mills ...	430,719,292	488,659,304	335,794,326
Coast mills ...	708,000,000	935,000,000	800,000,000
Pine mills ...	120,000,000	200,000,000	200,000,000
Spruce mills ...	97,000,000	204,000,000	195,000,000
Total shipments	1,355,719,292	1,827,659,304	1,530,794,326
American importation into four western provinces ...	264,413,000	300,000,000	133,146,000
Consumption ...	1,620,132,292	2,127,659,304	1,633,940,326
Stocks at end of year			
Mountain mills ...	255,000,000	188,000,000	216,941,531
Coast mills ...	225,000,000	200,000,000	225,000,000
Pine mills ...	150,000,000	100,000,000	75,000,000
Spruce mills ...	127,000,000	121,000,000	100,000,000
Total stocks end of year	757,000,000	609,000,000	616,941,531

In reviewing the result of operations for the year, the most striking fact is the enormous decline in the consumption of lumber in the four western provinces. During 1912 we find that the market consumed over two billion feet, whereas during 1913 the total consumption was one billion six hundred million feet, making a reduction of 463,000,000 feet. The production of lumber in the four western provinces has not at all declined in proportion to this decreased consumption. During 1912, mills manufactured 1,678,000,000 feet, and during 1913, 1,515,000,000 feet, making a net reduction of 162,347,000 feet. In other words, the curtailment in production has only been 35 per cent. of the lessened consumption. It is therefore clear that the only hope of better conditions in the lumber business is a substantial reduction in the output, which policy it is hoped will be generally followed by all manufacturers.

On referring to the figures showing the consumption of lumber in our market, we find that western Canadian mills have shipped about \$23,000,000 worth of lumber, of which mountain mills supplied

\$5,000,000—or 23 per cent. Adding to this amount the importations of lumber from the United States, we find that our market has consumed \$25,000,000 worth of lumber, or \$17 per capita population.

The Outlook For 1914 Trade

The outlook for this year has many encouraging features, but it is admitted that the bulk of trade will be confined to country points, rather than the larger centres of population; this by reason of the extensive programme now in preparation to attract bona-fide settlers, which is being carried on by three transcontinental railways of Canada. During 1913 there entered into western Canada 402,432 immigrants, as compared with 354,237 during 1912. I may say that during this year the Canadian Northern and the Grand Trunk Pacific will enter actively into this matter of settling along their respective lines, this campaign having been confined heretofore entirely to the Canadian Pacific. It is estimated that the figures of immigration this year should increase by about thirty per cent.

It is admitted that Canada—and particularly the western provinces—have developed abnormally during the past five years, and the time has come when retrenchment is the word of the hour. Curtailment of production is in vogue in all lines of business, and a similar policy will have to be followed by the lumber manufacturers, when, it is to be expected, business in general will settle down to a more normal advance—and should bring with it greater confidence and prosperity. The financial stringency has about come to a close, and the return to normal conditions in this respect is already noticeable. Loans are being made for building purposes, but it is not to be expected that large sums will be available for the development of speculative building in the larger cities. The inflated values established during the boom are a thing of the past, and bankers generally predict that an abundance of money will be available for industrial and other developments of the country.

The association has endeavored to be of the highest efficiency to all members, and in reviewing the year's work, I wish to call your attention to the order which was issued by the Board of Railway Commissioners for Canada early last year, allowing the application of your secretary for a 33 cent rate to northern points, where the mileages involved do not exceed those to Winnipeg. This order was strenuously contested by the Canadian Pacific Railway, and it was deemed advisable to compromise on a fair basis—which was done. I may say that this compromise effected a saving to the association of a large amount of expenditure in legal fees, etc., as well as bringing about the immediate publication of reduced rates, as contained in tariff W-2866. Reductions, thus obtained, while they do not represent any saving in money to ourselves (owing to reductions in delivered prices of lumber made) have opened up a much wider market for our product. The western freight rates case is being watched with interest, and the Golden rate case instituted by your secretary, has been made part of this rate inquiry. From the information which I have, I feel that a decision in this matter will be reached within the next two or three months and it is predicted that further substantial reductions will be made on all commodities.

The election of officers then took place with the following results:—President, Mr. Charles O. Rodgers, secretary-treasurer of the Canyon City Lumber Company, Creston, B.C.; vice-president, Mr. A. K. Leitch, managing director of the East Kootenay Lumber Company, Jaffray, B.C.; executive committee, W. F. Lammers, secretary-treasurer of the Adams River Lumber Company, Chase, B.C.; C. D. McNab, managing director Baker Lumber Company, Waldo, B.C.; W. M. DeCew, managing director, Western Pine Lumber Company, Grand Forks, B.C.; W. A. Anstie, managing director, Forest Mills of British Columbia, Revelstoke, B.C.; secretary-treasurer, A. E. Frank, former acting secretary.

A sales circular department was formed, with the view of distributing to all manufacturers promptly records of sales made. This is a department similar to that now being conducted by the Western Pine Manufacturers' Association of Spokane.

A motion was carried to move the head offices of the association to Nelson, B.C., at as early a date as possible.

A motion was also carried that the association establish a grading bureau at the head offices.

One of the features of the 12th annual convention of the Hardwood Manufacturers' Association which is to be held in Memphis, Tenn., on January 21-22 will be a discussion of logging and logging problems, considered from the standpoint of operations both in the hill country and in the lowlands. Results of practical experience as to methods and costs will be given, and an open discussion will follow. Excellent arrangements are being made for the success of the convention and a very large attendance is assured.

The seventeenth annual meeting of the National Hardwood Lumber Association will be held at Buffalo, N.Y., on June 18th and 19th.

Business Swinging Back to Normal

Editor Canada Lumberman:—

Vancouver, B.C., Jan. 9th.

The year 1913 opened up fairly well, and while we were at no time able to map out our way very far ahead, yet in the early months of the year a good volume of business was handled, though at no time did the prices obtained justify the transactions. The log supply in the early part of the year was light, and prices were very firm, ranging from one to two dollars higher than the prices prevailing in 1912. This worked a very great hardship on those mills which were solely dependent upon buying on the open market for their supply, and made it possible for mills operating their own logging camps to do business when the others could not. The year was ushered in amidst a blinding storm of optimism which prevailed pretty generally throughout the province, but in no place was it more noticeable than amongst the men who had logs to sell, or who expected to have. Plans were laid by them for the carrying out of a year's business quite unparalleled by anything in the history of the province, and some went so far as to predict a \$14 level for logs before the end of the season, and in consequence of these predictions many new operations were opened up, only to find the conditions altogether changed before their first boom was made up. With the mills it was different. We tried hard to appear optimistic, but it was of no use, there was a condition which must be met. We had gloomy forebodings of something that seemed to be in the air. We knew not what it was, but it was there, like Caesar's ghost, and we could not get away from it, and even at this date it is impossible to properly describe it. On the whole, my observations are that the lumber business in this province for the year 1913 has been very disappointing.

The year 1914 is stepping in very cautiously, and so far as logging and lumbering operations are concerned, indications are that it will tread lightly until a feeling of greater security prevails throughout the land. There seems to be nearly as much uncertainty existing at the beginning of this year as there was at the same time last year, but it is of a different kind. Last year it seemed as though some impending calamity was coming upon us, and we worked the whole year through under the disagreeable feeling which one experiences when it is believed that the worst is yet to come. With the opening of this year no one seems to have the temerity to predict anything worse than what we have already experienced, but rather the feeling seems to be that we have passed the worst, and are even now ascending the grade back to better times.

My own opinion is that while a certain amount of curtailment may be necessary, yet a reasonably good volume of business will be transacted in the last nine months of 1914, and I believe that, on the whole, the results of the year's business will prove quite satisfactory. I base this opinion upon several things, some of which I will mention. My information, so far as I have been able to gain anything of an authentic nature, is that stocks generally are light, or at any rate much below normal. Consumption has been light for the past year, owing to the prevailing feeling of uncertainty, and this does not apply alone to those consumers who were depending upon obtaining loans with which to carry out their projects, but also to the man with money. He wanted to see what was going to happen before going ahead with the contemplated building. The latter will now go on with his undertaking just as soon as the building season opens up, and this will give a stimulus to others, and pretty soon things will swing back to normal, or better, and we will be left to reflect upon the past year, and wonder how it all happened. Then, too, it is not unlikely that, during this temporary lull, many readjustments will be made in the methods employed which will prove beneficial, and help the wheels of progress to move more smoothly. Again, immigration has not ceased, but is still flowing in, and many of these newcomers have money, as was instanced at this port of entrance a few days ago, when a man and his wife with seven children were seeking to enter. The officer questioned him to see if he had the \$50 required by law, and the man pulled out his bank book written up for \$60,000. The officer could only remark "go on old man, you are the kind we want." These things considered, together with the fact, as shown by statistics, that the savings accounts throughout the Dominion were never in such a healthy state, can bring us to none other than the logical conclusion that this money is not going to lie still, but is going to join with the flow that is sure to come by the gradual loosening of the purse strings of outside capital for both public and private enterprises, many of which have already been entered upon. These remarks, while made directly upon the lumber situation, apply equally to the shingle industry, excepting perhaps, that the shingle business will be more especially benefitted by the readjustment of the tariff.

Having been actively engaged in the lumber and shingle business in British Columbia for the past twelve years, and associated in a responsible way in the manufacture and handling of twenty-five million feet of the former, and one hundred million pieces of the latter per year, I have had occasion to study conditions to some extent, and I offer the foregoing as my own private opinion of the situation as arrived at from general observations.—E. H. Newton.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Wanted

500,000 feet 1-in., 1½-in. Soft Elm.
700,000 feet 1-in. Basswood, Ash and Birch.
For delivery as soon as dry this year. State what you can supply and lowest prices on cars.
Box 945, Canada Lumberman, Toronto. 3-8

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Wanted to Buy

500,000 ft. log run, sawn Hard Maple, various thicknesses, M. C. out. Must grade proper percentage 1S and 2S and No. 1 Common and not to exceed 20 per cent. No. 2. Will pay cash when loaded on cars; or will buy good Maple logs in the round, 12-in. and up diameter.

Write P. O. Box No. 1595, Montreal, giving best price and rate of freight to Montreal.
2-t.f.

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

- 1 x 1 x 42.
- 1 x 1 x 48.
- 1 x 1½ x 42.
- 1 x 1½ x 48.
- 1 x 1¾ x 42.
- 1 x 1¾ x 48.

Require Thickness, 1/16-in. Plump.

Quality—Free from all defects.

Can take delivery of green or dry stock.

Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc.
24-1 T.F.

Cargo Spruce Wanted

For New England delivery. We will pay cash for the following:—
4/4x5-in. and up rough-D-I-S, both merchantable and cull.

- 2x3-in. and up rough-D-I-S, both merchantable and cull.
- 2x4-in. and up rough random, both merchantable and cull.
- 2x6-in. and up rough random, both merchantable and cull.
- 2x8-in. and up rough random, both merchantable and cull.
- 2x10-in. and up rough random, both merchantable and cull.
- 3x4-in. and up rough random, both merchantable and cull.
- 4x4-in. and up rough random, both merchantable and cull.
- 6x6-in. and up rough random, both merchantable and cull.
- 6x8-in. and up rough random, both merchantable and cull.
- 8x8-in. and up rough random, both merchantable and cull.

State fully what you have to offer, and when you could commence and complete shipment.
Box 947, Canada Lumberman, Toronto. 3

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-tf

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft. P. O. Box 392, Ottawa, Ont. 3-t.f.

For Sale

One thousand cords dry softwood slabs and edgings. Canada Pine Lumber Company, Limited, Hamilton, Ont. 24-1-2-3

For Sale

6,000 round cedar fence posts, 7-in. top, 8 ft. long. Good and sound. Apply M. C. Neate. Rockcliffe Park, Ottawa, Ont. 8

For Sale

Spruce and Jack Pine, sawn to order, up to 12 x 12. Write for prices.
H. C. DUNBAR,
Haileybury, Ont. 2-3

For Sale

About 200 M. ft. of Hardwood logs from 9-in. to 13-in. in diameter. F.O.B. cars, Sherbrooke.

Apply E. L. DANCHE,
Ascot Corner, P.Q. 1-4

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que. c

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,
Janesville, Wisconsin. 1-t.f.

Wanted-Machinery

Wanted

Double Seamless Edger. State make and price. G. A. Watson, Flesherton, Ont. 3

Wanted

Second-hand steam feed Cylinder. Must be at least 36 ft. long and 7-in. or 8-in. bore. Apply Box 932, Canada Lumberman, Toronto. 2-3

For Sale-Machinery

A Bargain

44-inch Wick Gang for sale at a bargain. In first class shape. Apply,
Fraser Lumber Company, Ltd.,
Plaster Rock, N.B. 2-7

Sawmill Machinery For Sale

1 3-block sawmill, cable feed; 1 "Canada Favorite" shingle machine; 2 shingle jointers; 3 shingle packers; 2 wood frame draw saws; 1 36-in. 3-saw edger; 2 combined lath machines and bolters; 2 power feed lath machines; 2 lath bolters.

H. W. PETRIE, LTD., Toronto. c

For Sale

- 1—Giddings & Lewis Horizontal Slab Re-saw.
- 1—Pair twin slabbers for ties.
- 1—Payette Box Board Edger.
- 1—Engine, 12 x 20, complete.
- 28—Wrought iron dry kiln trucks.

All in working order.

FIRSTBROOK BROS.,

Penetang, Ont.

24-1-2-3.

CORLISS ENGINES

150 to 175 h.p. cylinder, 16 x 36 in. stroke. This engine was new two years ago and was in actual operation less than one year. It is a Leonard's latest heavy design pattern, and is just as good as new. Would make an excellent Planing Mill engine. Can be bought at a bargain.

500 to 1000 h.p. Twin Vertical Steeple Compound Corliss Engine in first class running shape. Would make an excellent Saw Mill engine. A bargain for anyone who could use this engine.

500 h.p. Cross Compound Corliss Engine, direct connected to a 400 kw. 250 volt generator, complete, in excellent condition, with pumps and condenser. Can be bought at a bargain. Apply Thos. Hobbs, Mail Building, Toronto. 3

For Sale at a Bargain

- 1 10 in. x 10 in. Simplex Pump.
- 5 Steam Engines.
- 1 Killam Stock Gang (New).
- 1 Mitts & Merrill Hog, No. 20, 10 in. x 12 in.
- 1 Ricker with 30-in. Saw.
- 1 St. John Iron Works Driving Gear for Band Saw Carriage.
- Edger, Planers, Shingle Machine, Chain Blocks, Trolleys, Saw Arbors, Pulleys, Rotary Saws, and a large lot of Steam and Mill Fittings.

Address, T. N. McGRATH,

Tusket, N.S.

20-t.f.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted by thoroughly experienced Bandsaw Filer. Address H. J. c/o Canada Lumberman, Toronto. 2-3-4

Position wanted as single or double cut band sawyer for coming season. Good references. Box 940, Canada Lumberman, Toronto. 2-4

BAND SAW FILER, first class, wants position. Wide experience and thoroughly qualified for all kinds of filing or hammering in sawmill or woodworking factory. Satisfaction guaranteed. Sober. Best references. Address John Ackland, 253 Durand St., Sarnia, Ont. 3

A first class foreman carpenter desires to change his position. Specialist in transportable wooden buildings, such as hospitals, schools, cottages, bungalows, villas and farm houses. Have worked in the largest factory in Germany. Familiar with export trade to South America and Italy. Aged 39 years and energetic. Address Box 930, Canada Lumberman, Toronto. 3

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

Men for sawmill wanted: Engineer, fireman, sawyer, jacker, setters tail sawyer, lath contractor, pilers and others for Band Saw Mill at Kearney, Ont., for summer season. Cut is pine. State age, habits and firms previously employed with. Apply W. J. Armstrong, Biscotasing, Ont. 2-3-4

Salesman Wanted—Large Southern yellow pine manufacturers want a good Canadian salesman to travel Canada. Must know yellow pine trade. Good salary. Apply in first instance to E. J. Macintyre, 659 Peoples Gas Building, Chicago. 1-2-3

WANTED—An aggressive young man with some experience in the lumber business as City Salesman for a newly organized lumber company. Must be well recommended and desirous of getting results. Will have the option of becoming a stockholder in the company. When writing state age, experience and salary expected. Address J. P. Bertrand, Port Arthur, Ont. 8

WANTED—Retail Yard Foreman in a newly organized company at Port Arthur, Ont. One who is prepared to subscribe a certain amount of stock preferred. Must be sober and capable of showing results. In writing enclose references, state about what amount stock you could subscribe, and salary expected. Address Box 951, Canada Lumberman, Toronto. 8

WE WANT TRAVELLING SALESMEN to carry our lists on commission for the following sections: Western; Central and Eastern Ontario, New York and New England States. We carry large assortments of Spruce, Hemlock, Pine, Lath, Shingles, Yellow Pine timbers and planing, Fir, American Hardwoods, etc. State experience and connections and give reference. Apply Box 950, Canada Lumberman, Toronto. 3

Business Chances

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

Wanted to Buy

One or two lumber yards each doing a yearly business around \$30,000. Would like to trade some farms in on the deal. Apply to K. T., c/o Canada Lumberman, Toronto. 24-1-2-3

Saw Mill For Sale

Practically new. Fully equipped. Capacity 18 to 20 M. ft. daily. Engine 60 h.p., boiler 68 h.p. Everything modern. In perfect running order. Suitable for heavy timber. Will sell on ground or F.O.B. cars. Further information from Box 949, Canada Lumberman, Toronto. 3-4

For Sale

Fir and Spruce Timber Limits in the vicinity of Fort George. Price right and terms liberal. Will be sold in quantities as agreed upon up to 45 square miles. Timber not excellent in British Columbia.

If interested apply for further information to
D. J. McEACHERN,
Alvinston, Ont. 3-6

Retail Lumber and Planing Mill For Sale

Situated in best thriving town in Ontario, served by three railways, average of two hundred houses built yearly. Business averages over \$35,000 yearly. Would consider selling machinery and rent buildings and real estate for a term of years. For further particulars apply to

HAROLD L. KEARNS.

Orillia, Ont. 3-4

Saw Mill For Sale or Lease

What is known as the "Island Mill" at Little Current. Cutting capacity 140 M. inch lumber in 10 hours. In first class condition.

Possession can be given 1st January next. For further particulars apply to

THOMAS CONLON,

44 Church Street,
St. Catharines, Ont. 21-t.f.

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. t.f.

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

For Sale

Lumber Limits in Eastern Canada, 50,000 acres, large Sawmill, fully equipped going concern, on salt water. Correspondence solicited. Will be sold right to close estate.

Address, Timber Limits, care Canada Lumberman, Toronto. 22-t.f.

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Saw Mill Property For Sale or Rent

The following are some of its leading features: Situated near Little Current, on the Georgian Bay, on what is known as Picnic Island. Contains 37 acres of freehold property which includes the mill and more than twenty other buildings. It has been leased by the Wolverine Lumber Company during the past seven years, and their lease expires the first of January next. If they buy more limits they may likely continue the lease. In the meantime we are offering the property for sale or rent. The mill has been cutting about 20,000,000 a year on small logs and a ten-hour day. The Island is in unorganized territory and our yearly tax on it is only one cent an acre in addition to the Little Current school tax of about twenty-five dollars a year. The power consists of two engines—a 24 x 30-inch and a 20 x 20-inch cylinder. Five boilers 60-inch diameter by 16 feet long. A double cutting band, a wickes gang (36-inch) and a circular saw. Two trimmers, two edgers and good lath mill capacity. The protection against fire is probably the best on the Georgian Bay; with a fine large pump in the machine shop, and a water tank outside ninety feet high with water pipes leading to the mill and all the houses on the Island, four streams at once can be thrown on the mill. We carry \$62,000 insurance on the mill and on all the buildings, the average rate being less than four per cent. Our piling capacity consists of 2,200 feet of stone-filled docks holding about ten million feet, and ten million more in the rear on the ground. Vessels can load at the docks to sixteen-foot drafts and be well sheltered. First-class booming room for about 15,000,000 feet of logs, 650 booms and chains. We carry boiler insurance, and the inspectors' report this year testifies that everything is in good condition. The average loss of time during the past six years is probably less than three days in the season for repairs, and the quality of the manufacture is among the very best on the Georgian Bay. To build up this property at the present time would cost at the least \$200,000, but we do not care to go back to the active work of running it, and will sell the property free of encumbrance for \$75,000 and on easy terms of payment. There is now a railroad running into Little Current which will materially increase the value of this property. If we do not sell soon, would lease it for a term of years at a reasonable rent, and will be pleased to correspond with interested parties. For further particulars apply to the undersigned.

Thos. Conlon,

44 Church Street,

24-1-2-3 St. Catharines, Ont.

Miscellaneous**For Sale**

Tugboat, 65 ft. over all, 14 ft. 3 in. beam, 8 ft. deep, fully equipped with winches, 10 and 20-in. compound engines, surface condensers and pumps. All connections and pipes brass and copper. Address T. N. McGrath, Tusket, N.S. 20-t.f.

Tenders for Cedar Poles

Tenders will be received by the Suburban Construction Company, c/o G. C. Royce, 80 Sherbourne Street, Toronto, for the supplying of approximately:

2,300 45-ft., 8-in. top, Cedar Poles.
350 35-ft., 7-in. top, Cedar Poles.
100 60-ft., 8-in. top, Cedar Poles.

Tenderers will furnish particulars of the quality of the poles and point of inspection. 2-3

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterson Engine Works Company,
22-t.f. Brantford, Canada.

**MAIL CONTRACT**

Sealed tenders, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 6th of March, 1914, for the conveyance of His Majesty's Mails, on a proposed contract for four years, six times per week each way, over Streetsville (via Meadowvale and Churchville) Rural Mail Route, from the Postmaster General's pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Streetsville, Meadowvale, Churchville, and at the office of the Post Office Inspector, Toronto.

A. SUTHERLAND,

Post Office Inspector.

Post Office Inspector's Office.

Toronto, January 19th, 1914.

Brooms or Fans.

All woodworking machine: make refuse of some sort or another. Some more, some less; some shavings, some chips, some dust. So far, we all agree. Perhaps I am also safe in saying it is never wanted just where it is made. It has perforce to be removed somewhere—some time—somehow.

Now what is the best and cheapest way, eh? Oh, put in a fan and some piping, and there you are. Many, very many, have decided as above, and fondly fancied their troubles were over, only to find out they had bit off much more than they could chew. Some of you have been bit with the fan dog, and know why. Others, again, are wondering just what is the matter with their fan and pipes.

Firstly, it must be remembered that the dust-collecting business is skilled work. Any fool can buy a fan and run a few pipes; but it requires expert knowledge to know just what size, make and speed of fan that is wanted, also where to put it; how to lay out pipes to save awkward bends and corners, so as to obtain desired results. It is not a plumber's job, by a long way. Then perhaps by far the greatest stumbling block to the unwary is what power is

required. Yes, that's the word—power. It is the all-important item. Yet how many have installed blowers and never gave it a thought. It is the old story; put a pulley on the main shaft; it will not want much power to run a fan. Quite right; perhaps it does not require a lot of power to drive a fan, but it takes an enormous amount of power to drive a fan fast enough to do any good. It is a well-known fact that most sawmills are badly under-powered, yet they put in fans here and there, as though they were mere tops instead of power-hogs. It has been found and proved by bitter experiences, both here and abroad, that a dust-collecting system in a wood-working factory will consume from 25 per cent. to 33 per cent. of the total power required to run the plant. Say you have an average saw and planing mill that requires 100 h.p. to run it. Before you could install a proper, efficient dust-collecting plant you would require to find about 30 h.p. to work it. How many have so much power to spare—very, very few. That, to my mind, is the great drawback to fans—the want of power. So we have still to rely largely on brooms and shovels until some genius invents a good low-speed fan that does not require much power to drive, yet creates a suction strong enough to pull the limewash off the wall's.

The Uses of Beech

Woods which are free from objectionable taste find place in the manufacture of commodities which come in contact with food-stuffs, and beech has long been one of the chief woods so employed. Lard tubs, butter boxes and pails, and the beaters for ice cream freezers are other commodities for which beech serves admirably. For ice cream beaters the persistent hardness of the wood when subjected to attrition and abrasion while wet gives it peculiar fitness. Sugar hogs-heads are made of beech, partly because it is a tasteless wood and partly because it has great strength. It is an excellent ma-

terial for churns. A large class of woodenware, including veneer plates, dishes, boxes, paddles, scoops, spoons, and beaters, belongs to the kitchen and pantry, and beech is one of the common woods of which they are made. Beech picnic plates are made by millions, a single machine turning out 75,000 a day.

The wood has a long list of miscellaneous uses and enters into a great variety of commodities. In every region where it grows in commercial quantities it is made into boxes, baskets and crating. Beech baskets are chiefly employed in shipping fruit, berries and vegetables, and are of thin lumber, generally veneer, and intended to be used only once. In Maine thin veneer of beech is made specially for the Sicily orange and lemon trade. This is shipped in bulk and the boxes are made abroad.

Beech is an important handle wood, though not in the same class with hickory. It is not selected because of toughness and resiliency, as hickory is, and generally goes into plane, handsaw, pail, chisel, bundle and flatiron handles. Recent statistics show that in the production of slack cooperage staves, only two woods, red gum and pine, stood above beech in quantity, while for heading, pine alone exceeded it.



Montreal Engineering Co., Limited,
164 St. James Street,
Montreal.

**Timber limits examined,
cruised and surveyed.
Waterpowers developed.
Pulp and Paper Mills designed and constructed.
Projects financed.**

**PEAVIES****Cant Hooks, Boom Chains, Timber Dogs**

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

Review of Current Trade Conditions

Ontario

Trade conditions in Ontario have been very slow since the New Year. This does not mean that they are more than ordinarily quiet, but that various factors which come into play at this time of year have been having their customary effect. There has been little or no movement out of retail yards during January, and as a result, retailers are not buying stocks. Stocktaking, holidays and unseasonable weather have been the chief causes of this situation. Wholesalers, realizing that trade is practically at a standstill, have taken their men off the road in many cases, and are devoting their attention to looking over available stocks for purchases. A prominent Toronto wholesaler recently visited one of his good customers, with a view to selling him some stock, and found himself seventh in a line of wholesalers seeking to sell. He went back to his office, and meeting the representative of the Canada Lumberman, suggested that, if wholesalers would take their salesmen off the road at present and let the retailers have a little rest cure, the result would be a fair improvement in trade conditions.

Hemlock shows no change and prices are still maintained at former levels. Yellow pine seems to be a little firmer and manufacturers in the south report a slight improvement in the market. Lath are practically out of the market today. British Columbia shingles have not changed. New Brunswick shingles are very strong. A prominent New Brunswick manufacturer recently reported that a number of mills which will have an output of about 70,000,000 pieces during the year 1914 have already contracted for the sale of 50,000,000 pieces.

Eastern Canada

There has been little or no change in trade conditions at St. John during the past fortnight. Excellent conditions are reported from the woods all over the province. St. John mills are all closed. A St. John firm has sold 2,000,000 deals to English buyers at \$17 per thousand, on a specification of 50 per cent. 7-in. and 8-in. x 3-in., balance 9-in. and 11 x 3 in. This is the first sale of 1914 stock reported. St. John stocks of merchantable spruce boards, also refuse boards, scantlings, planks and deals are almost exhausted. Manufacturers are expecting about one dollar more per thousand for merchantable and refuse lumber this year.

The market for eastern spruce at Boston showed some improvement. Retailers have finished their stocktaking and, as a result, there are some fairly large contracts in sight. Frames are selling at a base price of \$24.50. Random is quiet, 2 x 4 in. selling at \$22; 2 x 3 in. at \$21; 2 x 5 in.; 2 x 6 in. and 2 x 7 in. at \$20; 2 x 8 in. at \$22.50; 2 x 10 in. at \$24 and 2 x 12 in. at \$24.50. Spruce covering boards, 5 in. and up are offering at \$22 and matched spruce, 12, 14 and 16 ft. at \$24.50. Prices for eastern spruce at New York are unchanged, but there is a slight upward tendency. Yard stocks of hemlock in retailers' hands at New York are reported low. The trade is of a hand-to-mouth character. A little better buying of hardwoods is reported from New York, but no extensive movement is noticeable. Plain and quartered oak are in good demand. The greatest activity is in the market for birch and maple. At Boston, retailers are holding back with their orders for hardwoods, and business is dull.

United States

A cheerful business spirit has commenced to make itself evident in the United States, in spite of the fact that reports, as yet, do not show that actual trade conditions have materially improved. There is a general feeling that the trade pendulum has commenced to swing in the right direction and the belief is prevalent that conditions will be considerably better in the near future. No one is looking for a boom, but nearly everyone is expecting improvement. Taking the yellow pine trade as an indication, it is interesting to note that mill representatives and wholesalers report a greater volume of actual orders during the past fortnight than in any single period in the year 1913. Yellow pine prices, however, have not advanced. An important feature of the trade has been the fact that a steady growth in building construction took place during the month of December. Stocks in the hands of retail and large consumers, in practically all parts of the country, are very low and they will find it necessary to come into the market for material quite extensively in the near future. The chief adverse feature of the trade is the fact that prices continue low, but this is likely to be improved as soon as the demand continues to be really active.

In the northern States, logging conditions had not been good up to the middle of January, but cold weather and more plentiful snow, which were then in prospect, promised to relieve the logging

situation greatly. At latest reports, zero weather was quite general and logging conditions had improved. White and Norway pine, hemlock and cedar have all been quiet, as is usual at this time of year. Manufacturers, after completing their inventories, report that the average of trade throughout the year was fairly satisfactory and that there was no important surplus of stock in any part of the country. Retail supplies are so light that a good spring trade would clean them up entirely. A better price is reported for hemlock, which is scarce and is expected to advance. The trade in general at Buffalo is quiet, with prices steady.

Hardwood consumers have only light stocks and a tendency is noticeable to resume buying, wherever prices are suitable. Most of the mills in the important manufacturing districts have sufficient orders ahead to keep them busy for some time.

There is a better demand for eastern spruce; but the price has not improved. Many of the eastern retailers are now replenishing their stocks.

Great Britain

Reports from London indicates that business is commencing to move again in the Metropolitan area. A certain amount of forward business is being arranged. Nothing of importance is reported in connection with prices. It is expected that freights will rule through the coming season at easier rates than last year, but there is no likelihood that the cost of goods will be lower than the average of 1913. Prices in general show little variation and the demand appears quite hopeful. Deliveries at London docks for the week ending January 3rd amounted to 5,848 standards as compared with 4,834 standards during the corresponding week of 1913. At Foy, Morgan & Company's recent auction sale prices showed little variation. Quebec spruce, 3 x 9 in. 3rd sold at £11 14s, and 3 x 7 in. 2nd Quebec spruce brought £10 10s. A lot of dry 3rd Quebec pine, 3 x 7 in., 10 to 16 ft., was sold at £15 15s per standard hundred.

At Liverpool, trade is commencing to take on a more active appearance. Travellers are on the road again and business is resuming its normal course. No change is reported in spruce deals, on c.i.f. business, which is confined to liner parcels. Very little business is being done ahead. Consignment parcels have been realizing fair prices. There is no immediate sign of a further decline in values. Arrivals by liner parcels have not been large. A report from Liverpool states that if there were no spruce arrivals from now until the commencement of the season, probably it would require a much better demand than is in prospect to bring about an advance in prices. There is practically four months' supply on hand at present. The spot market is rather at a standstill, the demand being only for active requirements. Very little business is being done on birch c.i.f. terms. A small amount of business is reported in Quebec pine deals and boards, but not enough to make any effects on stocks, which are held firmly by chief importers. At Manchester, it is reported that prices for spruce are "wobbly."

Will Operate Nepisiguit Mill

The Bathurst Lumber Company, Limited, Bathurst Village, N.B., are fitting out the Nepisiguit Lumber Company's mill which has been idle during the past two years, and which they purchased some time ago. They will operate the mill during 1914 as a saw and shingle mill. They are putting in shingle machines on one side and a band saw and a band re-saw on the other side and expect to have it in operation by the first of May. This, of course, will be an entirely separate operation from their present sawmill at Bathurst Village and will increase the company's output considerably from that point.

Fassett Company's New Plant in Operation

The new mill of the Fassett Lumber Company, at Fassett, P.Q., commenced operations on January 5th. Full night and day shifts were put on on January 19th. The company will run night and day throughout 1914. The main building of the plant is 186 ft. x 55 ft. and there are two wings 40 ft. x 60 ft. and 42 ft. x 138 ft. The plant is much larger than the one which the company formerly operated and which was recently destroyed by fire. The equipment includes two 8 ft. single cutting bands, two edgers, 5 slashers, automatic trimmers, etc., all installed by Clarke Bros. & Company, Olean, N.Y. The power plant consists of a 600 h.p. Corliss, 6 valve engine. A fire pump and dynamo are also installed in connection with the engine house. The mill has a solid concrete floor and foundations. It will cut 100,000 feet of soft-wood in ten hours.



View of Mills in Sarnia.

Quality, Quantity, Service

Look your stock over, and send us an order for what you need or wire for quotations. We always have large stocks of

***Norway and White
== Pine Lumber ==***

Also large timbers cut to order, any length up to 60 feet, from Pine and B. C. Fir.

***Headquarters For
Norway Silo Stock***

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

First Sale of St. John English Deals for the Year

St. John, N.B., January 23rd; (Special to the Canada Lumberman).—The last two weeks have seen very little, if any, change in conditions in this section. The winter is all that can be desired for lumbering, clear cold weather, thermometer standing around zero about all the time, with from six inches of snow in St. John County, to two feet or better in the interior of the province. The cutting and hauling of logs is progressing as well as can be expected, and if we have a good winter for balance of season, all logs should be hauled off yards without any trouble. Men for woods work still remain very scarce. All the mills in St. John are now idle and will remain so until the latter part of March. Locally, the lumber market remains about the same as at last writing, very little selling for 1914 has yet been done. It is said that one local concern has sold its first two million of deals to English buyers here for \$17 per M., 50 per cent. 7 and 8 in. by 3 in., balance 9 and 11 in. by 3 in., with the 3 x 4 - 5 - 6 in. at about \$1.50 per M. reduction with fourth quality about \$15 and ends around \$12, the average length being about 13 ft. 6 in. No other sales of English deals have yet been made. No laths have been sold ahead for 1914, in fact this is the only sale that has yet been made at St. John. Local stocks of merchantable spruce boards, also refuse boards, scantlings, planks and deals are about exhausted.

It is felt that prices of both merchantable and refuse lumber will be around \$1 per M. higher in 1914 than in 1913. This will no more than take up the increased cost of logging this winter. All fixed charges are increasing fast. Of course this advance in price will be regulated, not by the operator, but by the supply and demand. The supply will not be over plenty, and the price of logs will be higher. No sales of American stock have yet been made, but it is felt that there will be an improvement of at least \$1.50 per M. in American prices. Laths are being held for \$3.25 per M. on the wharves here. Box shooks and fish boxes of all kinds are in good demand, with prices hardening. Shingles still remain in the same position as they have been of late and do not seem to improve any.

Montreal Trade Continues Quiet

Montreal, January 27th (Special to the Canada Lumberman): As usual at this time of the year, business in lumber is dull. Some firms report an improvement over the corresponding period of 1913, while others state that the market is dead. The trade, however, is anticipating an excellent year. In 1913, the houses built were far short of requirements, and to meet the growing population, hundreds of flats and houses are needed. The demand is urgent, and will have to be filled. This indicates good orders for the lumber trade. Some extensive building schemes are also projected, and will be carried out, always provided that money becomes easier. Prices still keep firm, the tendency being towards a higher range. Several inquiries for birch for export to Great Britain have come to hand. Last year there was a decrease of birch shipments from the port.

In the pulp and paper sections there is a more buoyant feeling, in view of the fact that the banks are more inclined to give accommodation. Ground wood is better, as stocks are decreasing but there is a large tonnage yet to be disposed of, and until this is done there will not be a strong recovery.

Chemical pulp is firmer. One of the large mills has sold 90 per cent of its production, and has declined further contracts.

Hemlock prices during 1913 were \$1.50 higher and spruce \$2 higher than during 1912. The export trade to Great Britain was slow during the summer of 1913. The outlook for spruce and hemlock is good, as there seems to be a continual demand for stock sizes and stocks at the mills are small. We think that the market for pine and hardwood will be somewhat slower than last year.—Fassett Lumber Company, Fassett, P.Q.

The farmers here, as well as on the prairies, have realized good prices and have had fair crops during 1913. They are practically out of debt. Their credit is good for another year and this, together with the building of the C. N. R. as announced by Sir Donald Mann, ought to make the lumber business good during 1914. We found the volume of trade less by about half during 1913, as compared with 1912 and the profits were about the same, in comparison with the amount of business done.—Johnston and Carswell, Vernon, B.C.

The Uncertain Period Has Been Passed

Editor Canada Lumberman:

Boston, Jan. 9th.

The lumber trade seems to be more or less affected by the general rather depressed condition of business throughout the country, and in fact, I might say throughout the world.

The lumber business is apt to be rather slow to respond to either an improvement or a decline in trade, but it always seems to conform finally to the general existing conditions. Generally, in the past, when the lumber trade has been poor in one section of the country, or in one line of the business, it has been fairly good in some others. For instance, when the South American business was poor, the European, or English trade would be brisk, or when the New York business was very good the general business throughout New England was not as good. It is seldom that all portions of the lumber business are active at one time, and it is seldom that all are depressed at one time. We think, however, today, these conditions are rather different.

The South American market for lumber is very much depressed. There have been a number of failures in the Argentine Republic. Last year's crops there were not very satisfactory and prices have been declining, until, of late, shipments there have come pretty nearly to a standstill, and although there are a number of vessels on the market offering for South America they do not find takers.

Also, for the past few months the English market for American deals and other general sizes of lumber has been very quiet, and it has not yet improved much, although there seems to be a feeling in the trade that the English market will probably respond a little later and show improved conditions.

In the past month or two the general New England market, as well as the New York market, has been very quiet, and for the past three or four weeks many of the men in the yard trade have had hard work to keep their teams moving and many have discharged men and horses. However, we might say, this is not peculiar to the present year, as this is about the quietest season of the year in the lumber business, but altogether conditions are rather markedly dull at the present time.

Labor is now plentiful and we think there are a good many unemployed laborers,—a good many more than there were at this time last year. We find in our logging operations that men are plentiful in the woods and do not leave their jobs as they have for the past few years, feeling they might get something better or some more pay. Now they all stay and when we do happen to have a vacancy we can fill it at a reduced price.

Conditions seem to be fairly good for logging this year so far, and we judge that, if we get snow later, which is likely, there will be a pretty good average cut. However, the cost of logging is quite high still and it is exceedingly difficult to make sales showing a reasonable profit over the present cost of production.

Now, while we feel these conditions cannot prevail very long, we do not think the concessions are coming all from either side of the market. We believe that lumber will be produced a little cheaper this coming year than it was last year, the present stagnation will not last many months, and that prices will improve. Money conditions now show signs of easing up, as they generally do at this time of the year. We cannot help feeling, that the money tightness may ease up materially and reflect the present conditions. So we hope we have reached the lowest point for the present in the lumber market, and that improvements will begin to show themselves within four to six weeks. There is, however, no encouragement for buying at present, and we believe the sales, both for English consumption and the home market, have been very small, and would advise holding off at the present time. However, a large portion of the lumber manufactured is held by pretty strong operators.

Of course, it is early yet to say what the effect of the new legislation will be on the market, but as far as we can see, the feeling is one of relief, that the uncertain period is now passed and that we can very likely do fairly well with the laws as they now are, governing the currency and the tariff. We believe that during the next year things will largely adjust themselves to the present conditions. Whereas, in the past two or three months, business has been retarded considerably by the feeling of uncertainty in trade under the new conditions, we believe, now that the surgical operation has been performed, the patient will commence to recover. All things considered, we think perhaps the boiling down process will be found to have been very salutary.—H. B. Shepard.

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OF DRY SPRUCE IN CANADA

United Kingdom Increased its Imports

Took Greater Quantities of Wood Goods from all Exporting Countries—Russian Goods Continue to Displace Others—Trade of Chief Import Ports

The Board of Trade returns give the following statistics of the import of wood into the United Kingdom during the last six years:—

	1913.	1912.	1911.
SAWN & PLANED:—	Loads.	Loads.	Loads.
Russia	3,362,344	2,814,770	2,646,560
Sweden	1,370,998	1,220,958	1,101,359
Norway	294,617	309,716	308,668
United States	510,593	436,843	412,404
Canada	961,539	895,496	998,167
Other Countries	136,046	89,806	105,102
HEWN & PITPROPS	4,380,321	3,836,532	3,730,018
STAVES, MAHOG—	Loads.	Loads.	Loads.
ANY, etc.	573,353	454,263	438,158
Grand Total	11,589,811	10,058,384	9,740,436
	£33,789,356	£28,351,315	£25,847,077
SAWN & PLANED:—	Loads.	Loads.	Loads.
Russia	2,798,922	2,612,258	2,311,139
Sweden	1,217,339	1,043,037	1,235,895
Norway	329,498	397,260	381,441
United States	412,814	499,512	411,079
Canada	1,105,545	1,050,106	1,000,358
Other Countries	129,511	119,908	148,537
HEWN & PITPROPS	5,993,629	5,722,081	5,488,447
STAVES, MAHOG—	Loads.	Loads.	Loads.
ANY, etc.	437,525	399,243	456,171
Grand Total	10,078,088	9,549,485	9,827,943
	£26,198,854	£23,591,810	£24,306,059

Foy, Morgan & Company, London, Eng., in their annual wood report say:—

The importation of sawn and planed wood goods into the United Kingdom during 1913 has been very large, the largest in quantity since 1906, while in total value it has broken the record by several millions sterling. Compared with the average of the previous five years, the increase in the supply represents about 280,000 standards, or an excess of 16 per cent. in quantity and nearly 30 per cent. in value. This result has been brought about by the most familiar of all causes—the anxiety of everybody to participate to the utmost in the advancing trade boom. The import has been thus augmented, partly because the depleted condition of stocks at the outset furnished every inducement, if not the necessity, for a certain freedom in buying, a policy which was afterwards sustained by the optimism prevailing throughout the summer, while the keen desire to take full advantage of shipping opportunities during the time they lasted was no less natural, if only by way of reaction from the baneful experience of the previous year in respect of chartering. The possibility of this unwelcome surplus was, however, not suspected until the autumn was well advanced, and the fact that the production of Russian and Baltic goods had so greatly increased, occasioned considerable surprise. During the previous six years a policy of caution had held the supplies in severe restraint, but under the influence of a general trade boom the import has gone forward again with a bound, rivalling in quantity the more ample supplies customary in the decade ending with 1906, but far outstripping them as regards cost. The pendulum has in fact swung back again, and full stocks are held where formerly the barest quantities sufficed.

The average import cost per standard continues to rise year by year, the influence of high freights being especially marked during 1912-13, as the following figures show:—

1913—£10 9 3	1910—£9 9 3	1907—£9 11 0
1912—£9 18 3	1909—£9 0 3	1906—£9 4 9
1911—£9 9 0	1908—£8 16 6	1905—£8 10 0

Practically the whole of the surplus is accounted for by the increased shipments from Russia, which is responsible for 63 per cent., or about 165,000

standards, and from Sweden, which has contributed 17 per cent., or about 45,000 standards, the other sources of supply keeping in the aggregate fairly close to the average. The relative proportions derived from the different exporting countries over a series of years are stated in the following table, which exhibits the progress made by Russian goods in ousting other varieties:—

	1913	1911	1909	1907	1905	1903
Russian goods	51%	47%	46%	37%	35%	29%
Scandinavian goods	25	25	25	32	34	33
Canada and U. S. A.	22	26	27	28	28	33

The result of the past year's trading, although somewhat impaired during the last three months by the losses attendant upon the effort to unload while stocks have been accumulating, must yet have been more than usually satisfactory when compared with the series of lean and sometimes unprofitable years which have preceded. Business on the whole has been sound, while the turnover has increased considerably in quantity and still more so in money value, so that despite dear money, high freights, the malign influence of the Balkan War and other obstacles, it is safe to say that traders must have been making money—at least for the first nine months of the year. Throughout this period there were no surprises, no unknown and incalculable factors to defeat expectations or play havoc with the often too narrow margin of profit which separates the re-sale from the cost price. Except for a short time during March and April, few doubts as to the stability of the market were entertained, so that the whole circle of business operations kept moving quietly onwards for nearly nine months, high prices being accepted as the established order of things by the trade at large, including the consumers. While these conditions lasted, business was fairly profitable, and it was therefore with somewhat of a shock that the trade awoke to the discovery early in October that the security into which they had been lulled had been silently undermined by the mere accumulation of good things. The progress of events in 1913 has proved to be the very antithesis of what happened in 1912. In the year that has passed nine months of good trading have been succeeded by three months of unprofitable business, whereas in 1912 the first nine months were indifferent, if not bad, from a trader's point of view, and the last three months exceptionally favourable. October has often before proved itself a critical period; it marked the commencement and may be destined to mark the termination of the present boom. On the other hand it must be remembered that the prospects of an increase in consumption in the near future are particularly hopeful in view of the predicted revival of house and cottage building. If these anticipations are realised to any extent before next summer, the surplus of stock may be easily absorbed.

The comparative freedom from bad debts during the past year may be regarded as another sign of the profitable character of the trading, which has, moreover, been enjoyed in equal degree by all classes—shippers, importers and dealers, so that the retrospect may be said, with less qualification than usual, to be a favourable one.

Regarding the trade in Canadian goods the report says:—Pine.—Trade has been quiet, but a profitable business was done until the end of August. During the last few months complaints have been rife as to the paucity of orders, but as the stock is held in few hands, there is no likelihood of prices receding, especially in view of the high cost of future supplies. The prices c.i.f. opened at £40 10s., £28 5s., £17 15s. and £12 10s. for 3 x 11, £30 5s., £22, £14 5s. and £11 for 3 x 7 to 10-inch 1st, 2nds, 3rds and 4ths, respectively. The market for pine sidings has been a weak one throughout the season.

Spruce.—Prices for Quebec deals opened at £11 10s. for 3 x 9 and £10 for 7 and 8-inch 3rds, c.i.f. liner ports. For several weeks business was rendered impossible to the outports in consequence of the extravagant freights de-

CANADIAN PINE

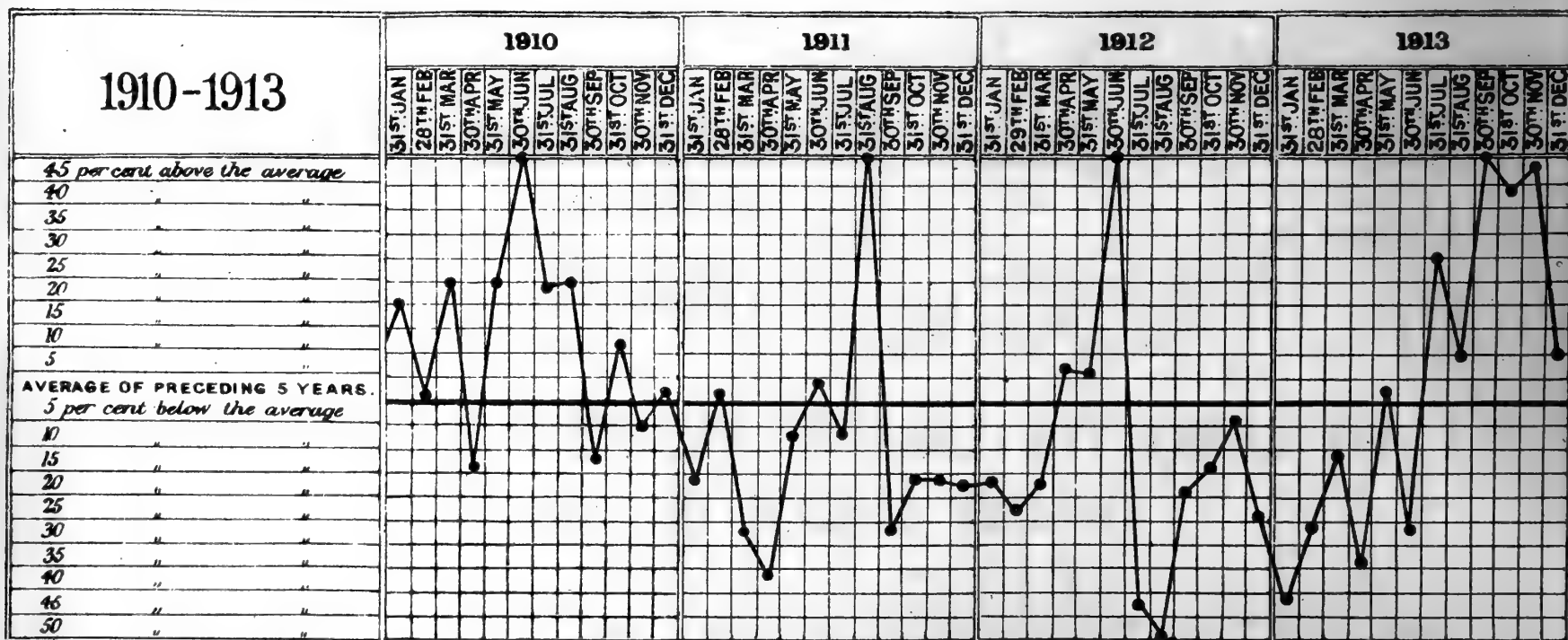


Diagram showing estimated duration of supply in comparison with averages of the same, at the same time in previous years—Foy Morgan & Co., London.



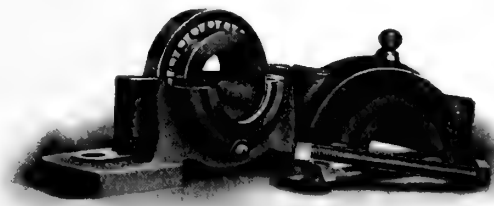
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manded for tramp steamers. Towards the latter part of February Lower Port spruce was however pressed for sale at reduced prices, in the belief that a heavy fall in freights was imminent, and this continued until May, when the current price for average specifications was £10 c.i.f. These early shipments were welcomed as a cheap and profitable substitute for Rigas along the West Coast ports, where stocks had become denuded to an almost unprecedented degree. The strike at St. John in June, resulting in a partial cessation of shipments, led to some recovery in prices, which lasted until September, when heavy shipments began to pour in by the liners, and as a consequence prices have recently receded 10s.-15s. per standard in such ports as London and Liverpool. The market in Canada for next season is regarded as particularly strong, so that the position is now somewhat anomalous—prices receding on this side concurrently with a strengthening market in Canada.

Annual import into London from 1st January to 31st December was as follows:—

		1913	1912	1911	1910	1909	1908
Deals (Fir)	Pieces	6,712,627	6,143,393	5,521,400	5,954,803	6,368,310	4,609,794
Battens (Fir)	Pieces	11,103,925	11,139,462	10,000,014	11,621,707	10,966,403	9,607,442
Pine	Pieces	956,333	1,063,930	946,289	1,126,131	918,341	826,543
Spruce	Pieces	1,805,007	1,597,798	1,599,040	2,007,636	2,036,836	1,471,025
Pitch Pine Deals*	Pieces	109,913	46,840	49,764	45,371	52,885	49,917
Deals and Battens in aggregate	Pieces	20,687,805	19,991,423	18,116,507	20,755,648	20,342,275	16,564,721
Rough Boards	Pieces	24,779,607	17,924,700	15,101,094	15,467,623	13,428,977	12,015,002
Planed Boards	Pieces	16,791,787	17,795,123	16,283,539	18,429,308	18,561,882	16,876,045
Floated Timber	Loads	44,973	28,912	38,884	26,941	40,142	29,183

*The Pitch Pine import excludes any delivered overside.

Wood Imports into England

Churchill & Sim, London, Eng., in their annual wood circular give the following analysis of wood imported into the United Kingdom during recent years:

Wood imported into the United Kingdom in the following years:—

	1911	1912	1913
	Loads	Loads	Loads
Colonial Deals, Battens, etc.	998,167	895,496	961,539
Colonial Timber and Hardwoods	39,368	53,109	39,656
Foreign Deals, Battens, and Boards	4,574,093	4,872,093	5,674,598
Foreign Timber and Hardwoods	3,690,650	3,783,423	4,340,665
Colonial and Foreign Staves	158,396	169,295	182,131
Total, in Loads	9,460,674	9,773,416	11,198,589
Value	£23,800,586	£26,238,259	£30,878,619

London's Imports from Canada

Importations into London from Canada during recent years were as follows:—

	1910	1911	1912	1913			
	Pieces	Pieces	Pieces	Pieces			
Pine Deals, etc., from the St. Lawrence.	563,000	400,000	590,000	508,000			
Spruce Deals, etc., from the St. Lawrence..	969,000	970,000	804,000	1,155,000			
Birch Deals, etc., from the St. Lawrence..	283,000	320,000	342,000	303,000			
Spruce Deals, etc., from New Brunswick, etc.	635,000	436,000	490,000	468,000			
Birch Deals, etc., from New Brunswick, etc.	326,000	249,000	400,000	373,000			
Timber	1907	1908	1909	1910	1911	1912	1913
	Loads	Loads	Loads	Loads	Loads	Loads	Loads
Yellow Pine from Quebec...	58	....	74	....	....	....	420
Red Pine from Quebec	34	....	118	2	27	154	15
Elm from Quebec	1,075	1,162	1,397	1,611	1,718	1,059	2,952
Ash from Quebec	252	210	151	10	16	69	52
Oak from Quebec	8	....	69	112	108	34	210
Birch from Quebec.	837	899	1,524	1,215	1,619	1,246	1,761
Birch, Nova Scotian, etc....	123	310	487	238	138	225	....

The pine deal trade in London, once such an important part of the general wood business of the port has gradually shrunk to very small proportions, and is now the specialty of a few merchants, where formerly it was a feature in the stocks of many. The scarcity and consequent high prices of the better qualities are responsible for the decline in this particular trade, consumers having been driven to make use of cheaper substitutes. There has been little change in prices and few general market transactions. Spruce deals have come forward rather more freely in a season in which whitewood from all producing countries has been in strong demand, and in spite of the check to importation occasioned by strikes at Riga and St. John, the year closes with a heavier stock than usual, and weaker London prices in consequence. The action of the United States foreshadowed twelve months ago, of removing the duty on Canadian lumber crossing the border having now been passed by Congress, the effect will doubtless be felt in the near future. It is only natural that the United States should seek its supplies from as near home as possible, and the artificial barrier of a tax on lumber was bound to be broken through as soon as it was found that the native production was insufficient for the needs of the country. One result must be to throw the European demand more strongly on to Russian and Swedish whitewood for the future, as supplies of Canadian spruce for this country get scarcer and dearer. There has been a rather larger arrival of yellow pine, elm, and birch timber during the year. Birch planks have been a good market. The supply was somewhat checked by the strike at St. John, and there was no excessive importation in consequence.

British Columbian and Oregon Pine

The market for Oregon pine was steady during the whole of 1913; the effect of a severe fall in the rates of freight, which became accentuated during the late summer, will not be felt until the autumn of 1914, when the sailing ships chartered at reduced rates should begin to arrive. The fact that timber of extreme lengths cannot be supplied from any other sources, invests the Oregon pine trade with a security which keeps values steady so long as there is no temptation to over-production. Although pitch pine prices, on account of the great decline in tonnage rates, have fallen some 30 per cent., in the year, the fall in price of the long special logs is no more than 10 per cent., owing to the small proportion of such logs obtainable. The initial cost of lumber declined rather sharply during the summer on account of the failure of the Australian demand, but quotations are inclined to harden again. The preference of buyers for northern wood has been fully justified in the past, but some exceptionally fine cargoes from Portland arrived during the year, showing that exporters are now exercising more care in their selection of logs than was formerly the case. Some progress was made with the sale of silver spruce and clear douglas fir, and if they were not so expensive there should be a good prospect for the future of these woods, unique as they are in quality and in size. Just now the shipments of spruce have accumulated and it will need some patience to maintain prices. The consumption is limited, and demand cannot be forced except at sacrifices which are not necessary.

New Year's Trade at Glasgow

Cant & Kemp, Glasgow, in their annual timber market report, say:—

The year which is now closing has, generally speaking, been one of great industrial activity. The years 1911 and 1912 were both satisfactory, but this year has surpassed them, and it may be stated that 1913 has attained the highest level of prosperity which the trade of the nation has ever known. These results would have been even greater, had it not been for the difficulties which have surrounded the labour market, and while actual strikes were perhaps fewer than in 1912, many employers have had to contend with difficulties which are very troublesome to remedy, e.g., that of broken time. This has been very apparent in shipbuilding, and employers have been greatly handicapped through the difficulties in this respect. Many yards have been greatly disorganized, work delayed and contracts not completed up to time. Further, it is freely stated that higher wages than ever are now being paid, and employers are getting less real value for their money.

On the whole, the year 1913 has been a good one for the timber trade, but unfortunately 1914 does not look so promising. The demand during the earlier part of the year was steady, while during the later months, the enquiry was very limited. Generally speaking, stocks show a substantial increase and there is a feeling that in several items prices will be weaker. At present this market

CANADIAN SPRUCE

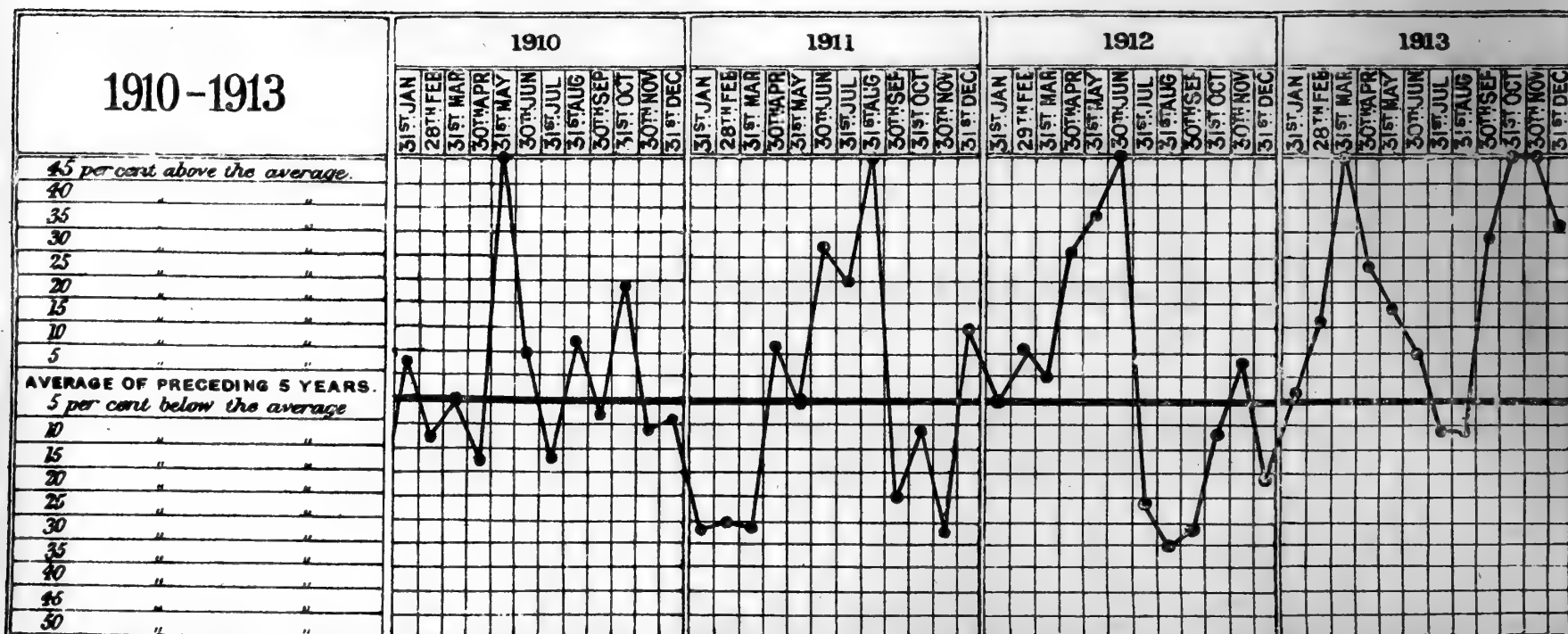
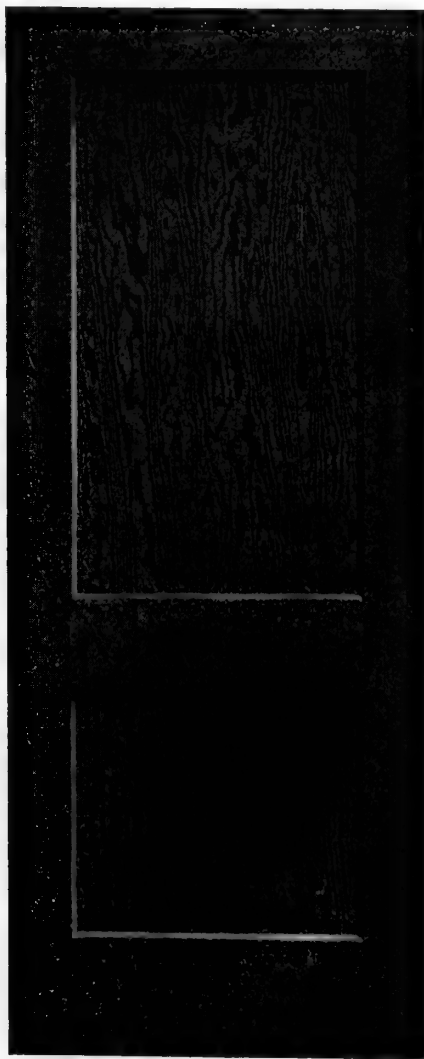


Diagram showing estimated duration of supply in comparison with averages of the same, at the same time in previous years—Foy Morgan & Co., London

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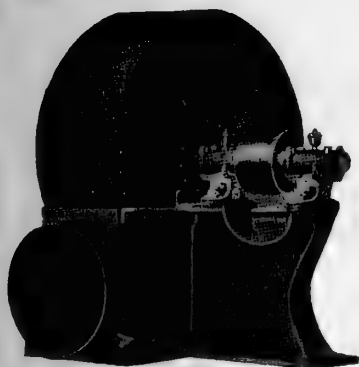
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Death of Mr. Martin Burton

Mr. Martin Burton, one of the best known lumbermen in Ontario, died on January 20th at his home in Barrie, Ont., death being the result of weakness of the heart, from which he had been suffering for some months. Mr. Burton's activities in the lumbering industry were greatest a number of years ago and he was not so well known of late as others who have come up in the industry since those days. Throughout his life, Mr. Martin Burton was one of the foremost men in business circles in Ontario. He was a son of the late John Burton, a lumberman, and was born at Millbrook, Ont., 62 years ago. When a boy he moved to Barrie and early in life became identified with the steamboat business on Lake Simcoe. With his brothers, the late James L. Burton and George Burton, he operated the steamer *Ida Burton*, which they owned. This was about the year 1870. His brother George Burton was drowned about that time. When the Northern Railway was constructed north from Barrie, James L. Burton and Martin Burton formed a partnership which was carried on, up to the time of Mr. Martin Burton's death, under the name of Burton Bros. They went extensively into the lumber manufacturing business and were very successful. After the death of Mr. James L. Burton, Mr. Martin Burton continued in the lumber business, but went more extensively into the manufacturing of square timber. Their large mill at Byng Inlet, Ont., was burned a number of years ago. Burton Bros. were also active in the purchase of timber limits in various parts of Ontario and also in the United States. Recently Mr. Burton acquired large interests in Wisconsin, where extensive quantities of square timber are being taken out. Mr. Archie Burton, son of the late Mr. Burton, was in Wisconsin at the time of his father's death, looking after the business.

Mr. Martin Burton was one of the outstanding figures in the development of Barrie. With his brother, Mr. Jas. L. Burton, he was one of the original organizers of the Barrie Electric Light Company, which was formed to supply light to the town at a fixed sum per year. They secured their power from a stream from Little Lake near Midhurst, but after a few years this became inadequate for the growing demand, and the power house was built in Barrie. The company was taken over by the town when their franchise expired, and the same power house was improved and enlarged. The Barrie Gas Company, of which Mr. Burton was the president, was another company which he and his brother took over shortly after the Electric Light Company was formed. For a number of years Mr. Burton was general manager of the Northern Navigation Company, and at the same time Mr. Jas. L. Burton was president of the same company. Mr. Burton was vice-president of the Barrie Carriage Company.

Mr. Burton is survived by his widow, who was a daughter of the late Arch. Thomson, one of the first families of Barrie, and by one daughter, Mrs. Nat. Dymont, and one son, Archie. He was the last surviving member of the Burton family of lumbermen, who have been known as among the largest dealers in lumber in the province for many years.

Sudden Death of G. G. Miles of Toronto

The sudden death of Mr. Geo. G. Miles, lumber dealer and sash and door manufacturer, as a result of heart failure, which occurred on January 13th, came as a great shock to the lumber trade of Toronto. A serious fire was in progress in buildings at the rear of his planing mill, when Mr. Miles, while occupied at the telephone, fell back dead. Mr. Miles' own office building at 536 Dundas street, was only slightly damaged, although at the time of his death it appeared to be in imminent danger of destruction.

Mr. Miles, who was 64 years of age, was one of the most prominent lumbermen in the city of Toronto and was engaged in a very

large way in the business of woodworking contracting. Among the large undertakings for which he furnished material during recent years were, the new Western Hospital, Sir Henry Pellatt's residence and the recent addition to the Robert Simpson Company's store. Mr. Miles was at one time a member of the Parkdale Town Council and was a past president of the Caledonian Society. He took an active part in politics and at one time was an unsuccessful candidate for the Ontario Legislature. He leaves a widow, two sons and two daughters.

Death of David Richards of Campbellton, N. B.

The death of Mr. David Richards, which occurred at Campbellton, N.B., recently, removed from the ranks of New Brunswick lumbermen one of the best known and most successful operators in Eastern Canada. Mr. Richards had been in poor health for some time, and death was the result of an attack of apoplexy. The late Mr. Richards, who was in his 73rd year, was born in Hampton, York County, and devoted his early years to farming. About thirty years ago he entered the lumbering business, becoming a member of the firm of The Wm. Richards Company, with head office at Boiestown, N.B. The first lumbering operations conducted by the firm were carried out on the Miramichi. Later, Mr. Richards moved to Campbellton, becoming manager of the company's branch at that place. Under his direction the business increased greatly. The company now have three large mills in operation.

The late Mr. Richards took deep interest in all the affairs of his town and at the time of the disastrous fire which destroyed Campbellton, he set an excellent example in assisting the citizens in rebuilding their homes. Mr. Richards was a man of kindly disposition and remarkable business tact. He leaves three sons and four daughters.

Death of Mr. W. A. Crombie

Mr. W. A. Crombie, senior partner in the firm of W. M. Crombie & Company, New York, and selling agents of Mr. E. H. Lemay, Montreal, died in New York on January 3, aged 69. Mr. Crombie lived for many years in Burlington, but 22 years ago took up his residence in New York city, and during the whole of the latter period had business relations with Mr. Lemay. He was greatly esteemed both in social and business life. The business will be continued under the management of the two sons, Messrs. W. M. and A. C. Crombie.

Pulp and Paper Trade With United States

A striking growth in the export of Canadian pulp and paper to the United States and a substantial increase in such imports from that country is shown by the official figures for Canadian trade during the 1913 fiscal year, issued by the Trade and Commerce Department.

According to this report the export to the United States of wood blocks for pulp was \$6,806,945 in 1913, as compared with \$5,697,901 in 1912, while the exports of paper were nearly double, \$4,390,144 in 1913, as compared with \$2,086,304 in 1912 and \$2,075,889 in 1911. The paper export was divided as follows: Felt paper, \$3,240, as compared with \$5,235 in 1912; printing, \$4,242,298, compared with \$1,989,863 in 1912; wall paper, \$7,107, compared with \$6,568 in 1912; wrapping, \$96,922, compared with only \$68 in 1912, a striking increase.

The import of wood pulp from the United States was \$191,345, compared with \$49,991 in 1912, a heavy increase. The total imports of paper were \$5,754,156, as compared with \$4,221,220 in 1912, of which the largest items were: Paper, manufactures of, N. O. P., \$1,787,319, compared with \$1,284,467 in 1912; wrapping paper, \$1,368,366, compared with \$916,445 in 1912; tarred and building paper, \$684,484, compared with \$257,430 in 1912; printing paper, \$499,096, compared with \$489,555 in 1912.

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Illustrated are the two most popular lumbermen's mackinaws. Pure wool garments, strongly made, comfortable, roomy.

Our pure wool mackinaws are made in every style and for every purpose. Lumbermen in need of mackinaw clothing cannot secure better value than is found in the Smart-Woods line.

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Prairie Province Business Uncertain

Indications of Improvement Noticeable, but Loan Companies and Banks Still Holding the Reins—Opinions of Prominent Lumbermen

IN the prairie provinces, as in other parts of Canada, the lumber market situation to-day presents so uncertain an aspect that few members of the trade are disposed to venture anything in the form of a prediction regarding the probable course of trade during 1914. Although a growing feeling of encouragement is evident, the financial situation in general is such that definite forecasts are unsafe. A few lumbermen, however, who have watched developments closely, have expressed their views to the Canada Lumberman in a guarded manner, and from them, the following outline of last year's trade and the prospects for 1914, has been prepared.

There is no question that business in the west was comparatively quiet during 1913, especially during the last six months. A few large concerns report fairly brisk conditions during the first half of 1913, but on the whole, the year was unfavorable to the industry. The gross business transacted was considerably less than that of the year preceding. Some firms report a falling-off of as much as 35 per cent, while hardly any have experienced any increase in business. It is probable that, in the aggregate, a decrease in the lumber trade of Manitoba, Saskatchewan and Alberta, of from 25 to 30 per cent., took place in 1913, as compared with 1912. This is a large amount, but in judging of its importance it must be recalled that 1912 was an exceptionally good year, which should not be taken as a basis for comparison. Conditions during the past twelve months probably appeared worse than they really were, on account of the unusual prosperity which preceded.

Rural and City Trade Decreased

Both rural and city trade fell off during 1913. The policy of restriction which was adopted by banks and loan companies throughout the country resulted in a general curtailment of building operations, with a corresponding decrease in the demand for lumber. In addition to this the harvesting and marketing of the biggest crop on record kept the farmers fully employed throughout the fall, and prevented them from attending to repairs and additions to their farm buildings. Another factor in the situation is that the building boom of the previous year increased the supply of dwellings and office buildings available in many western cities beyond immediate requirements, and while, at present, the requirements of the rapidly-growing population have done a good deal to overtake the surplus in accommodation, it is probable that there still exists an oversupply which will take a portion of the coming year's expected immigration to absorb.

The local demand for lumber in Winnipeg has been very well maintained. The total of building for the year shows only a slight decrease as compared with that of 1912, and firms carrying on a purely city trade report a good volume of business. In the smaller cities, however, and in the rural districts, things have been rather different, and reports from line yard concerns vary greatly. Some districts, notably that which has Swift Current as its centre, seem to have experienced a very active demand, while from the head of the lakes, reports of generally favorable conditions as regards demand have been received. In other neighborhoods trade has been unusually dull, while quietness has been the key-note of the prairie trade.

At present, the lumber industry is seasonably quiet. Stocks are reported variously, as normal or low, and as soon as the demand upon the retail dealers becomes active with the opening of spring, a good deal of buying will take place. Prices at wholesale are firmer, and collections are reported as satisfactory.

Optimism Commencing to Appear

Turning from the past and the present to a consideration of the possibilities of the future, we are, at once in the realm of conjecture, and of rather wild conjecture at that. Many of the lumbermen interviewed in this connection, though willing to talk, did not wish to place their opinions before the public, and those who were less reticent were very guarded in making definite statements. The general sentiment, however, is undoubtedly one of optimism. Developments will depend to a great extent upon the policy adopted by the loan companies and the banks. If these loosen up, a prosperous year is assured. As these institutions cannot afford to hold money beyond a certain point, and as it is believed that there is already a fair amount of money on hand, it appears as though they will find it advisable to adopt a somewhat more liberal policy. This, coupled with the fact that there is likely to develop during the year a fair demand, at least, for buildings should stimulate the lumber industry. No exceptional activity is to be anticipated, but the indications are that the coming year will witness a material improvement in the lumber business of the west generally. It is certain that the retrenchment which has been forced upon the country during the past months, and the more cautious methods which will

probably prevail in business for some time to come, will help to place the development of the west on a more assured basis than it has ever been on previously, and will make for a sounder, if a less spectacular, prosperity.

Speaking of the situation generally, Mr. A. K. Godfrey, manager and secretary of the Monarch Lumber Company, and president of the Winnipeg Grain Exchange, stated that, in so far as it was possible to judge from present indications, it was his opinion that the coming year would be a good one from the point of view of the lumber industry, though he admitted the difficulty of forming a definite judgment. Stocks, he believed, were normal, perhaps lower than normal. Under the present financial situation dealers were not inclined to speculate in lumber. Mr. Godfrey expressed the opinion that retail merchants generally would, in the future, go easier on credits, and that, while this might circumscribe to some extent the volume of business transacted, it would certainly establish the trade on a more substantial foundation than it has been on in the past. He also pointed out that during the past few months a process of general re-adjustment had been, and still was going on. While this had had a depressing influence on trade, it had served a good purpose, and would react to the eventual good of the country.

Difficult to Foretell Anything

H. S. Y. Galbraith, manager of the British Columbia Mills, Timber & Trading Company, Limited, in Winnipeg, expressed the following opinion: "In the present condition of the lumber industry and the financial business it is difficult to make any forecast. I fancy, however, that lumbermen in the prairie provinces may look for a good rural trade during the present year. In the cities trade may continue rather quiet, as in more than one western centre building has been rather overdone, with the result that there will be a smaller demand in such places for new structures, and as a consequence of this, a light call for lumber. Stocks in the retail yards are, however, generally light, and this will lead to considerable retail buying as soon as the season opens and the demand becomes active. A number of the mills have also been successful in reducing and breaking up stocks to a considerable extent, and this will necessitate a good volume of manufacturing, to meet the needs of the coming season. I do not look for a boom, but I think a very fair volume of business will develop as time goes on, particularly during the later summer, should crop prospects be good. The financial situation is improving, and should show further improvement as time goes on. The banks have lots of money, and will release it for legitimate undertakings."

A. R. Cavanaugh, of the Red Deer Lumber Company, stated that during the past year the demand for spruce lumber had been good, and that, while trade at present was seasonably quiet, the prospects for the coming year were good. Referring to the financial situation, Mr. Cavanaugh said that collections had been good, and money promised to be freer during the coming year than it had been during 1913. He also stated that the season had been an excellent one for logging.

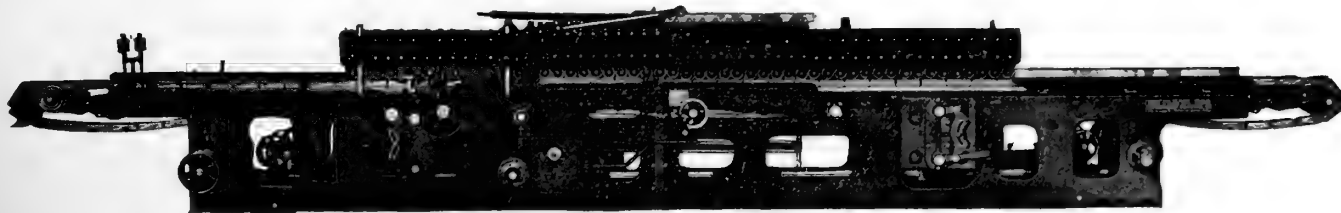
Outstanding Credit a Factor

G. H. Wall, manager of the Dutton-Wall Lumber Company, said that he thought the coming year would be much the same as the past year had been. There was still so much outstanding credit in the lumber business that business of this nature would have to be curtailed. This would react against any causes tending to a material betterment of business activity. Speaking of the financial outlook, Mr. Wall expressed the opinion that money would remain more or less tight for some time to come, and that, while the banks had sufficient for legitimate enterprises, they were not inclined to lend on anything of a speculative nature. Collections had been little better than they were at a corresponding period of last year. Referring to stocks, Mr. Wall stated that the spruce mills of the prairie provinces were carrying an average stock, as were the mountain mills, and that at the coast the mills generally were short on commons and long on the higher grades.

Drawing a mean through these opinions, and judging, so far as one may, by the present trend of business, the situation is best summed up in the words of a well-known Winnipeg wholesale lumber dealer, who desired to remain anonymous. He said, "We don't know, but we hope. It is impossible to forecast conditions. A little war somewhere might throw things back, while an industrial depression in England would bring money into the country, and things would boom. Apart from these eventualities, it is probable that some improvement will take place during 1914, and that such improvement will be maintained until prosperity reaches a high water mark. But that may not be for two, or even three years yet."

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Three Points for Consideration

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1st **4" Common Lumber**

In most Western Mills this is sold for approximately \$7.50 per thousand, whereas 8" shiplap brings from \$14.00 to \$16.00.

THE LINDERMAN DOVETAILER will take two 4" strips, convert them into a board 7 $\frac{3}{4}$ " wide, allowing $\frac{3}{4}$ " for jointing both edges to make the lap, leaving a full 7" face, at a cost of 75c. per thousand board feet. Add the cost of handling the lumber and of milling it into shiplap, leaves a net profit of at least \$4.00 a thousand.

2nd **No. 3 Grades, 6", 8" and 10" wide**

In most Western Mills No. 3 Grades increase in price perceptibly as it increases in width. One prominent lumber manufacturer maintains by converting 6", 8" and 10" widths of this grade into 12", 14" and 16" lumber, he will be able to obtain fully \$4.00 a thousand more for it.

The cost of jointing this lumber on a LINDERMAN MACHINE is 75c. per thousand, leaving a net profit of \$3.25.

3rd **2" and 3" Strips**

Practically all mills leave in the slab or convert into lath all lumber, regardless of the grade, under 4" in width. By installing a LINDERMAN MACHINE and by saving all 2", 2 $\frac{1}{2}$ ", 3" and 3 $\frac{1}{2}$ " stock this lumber can be converted into any width board desired at a cost which will average approximately \$1.00 per thousand board feet. Profit from \$4.00 to \$8.00.

We are willing to send, at our expense, several pieces of 16' long 8" lumber joined by our method, in spruce, to any Lumber Manufacturer in the Dominion to be milled by his usual method inspected and put to any test as to strength, durability and equality as compared with 8" one-piece stock or we will join up any lumber which we can purchase in our local markets, if spruce is not acceptable, or will join, free of charge and will stand transportation charges both ways, any lumber which may be sent to us up to 1,000 feet.

A LINDERMAN DOVETAILER installed in your mill should and can save you at least \$5,000.00 a year, if not more. We realize thoroughly this is a large figure, but would like the opportunity of putting our proposition before you so that it may be thoroughly considered by you and your assistants.

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— WORKS AT —

Woodstock, Ont.
Canada

Anglo-Newfoundland Company had a Good Year

The annual report of the Anglo-Newfoundland Development Company for the year 1913 shows that the gross profits of the company, after making provision for depreciation, amounts to £65,000, which compares with £51,200 in the preceding twelve months and £34,700 in 1910-11. Debenture interests absorbed £24,800 and a further £10,000 was set aside for the redemption of the debenture debt. This leaves a net profit of £30,100, which compares with £9,800 in the previous year, when, however, although there was no charge for debenture redemption, a sum of £16,400 was written off out of revenue to cover the expenses of the issue. The result of the year's operations is to leave a balance in hand, including the sum brought forward, amounting to £45,200. This would have sufficed to pay a modest dividend on the preferred ordinary shares and still leave a good balance. The directors, however, decided to carry the whole balance forward and thus strengthen the financial position of the company.

The annual report of the directors states that the output of the mill is increasing and the quality of the paper and pulp continues to give satisfaction. Already the whole of 1914 production has been sold. In 1911-12 the company's profits were earned out of an output of barely three-fifths of the capacity of the completed mill, while the company suffered as a result of shipping and coal mining strikes. The last year's production would have been considerably greater had it not been for the fact that while improvement was made in the efficiency of the mill, this was offset by a further rise in the price of coal and partly also by high freight rates. The report indicates that the removal of the duty on pulp and newspaper by the United States has improved the company's outlook, as the mills are capable of supplying far more than the requirements of the newspapers in England which control its share capital. The report states, however, that further expansion of the company's operations will be made during the continuance of the present Newfoundland tariff.

New Track Scale Regulations

Complaints which have been made by Canadian lumbermen and paper manufacturers regarding the weighing of shipments on railway track scales may be obviated by a series of new regulations regarding weights and measures which have been promulgated by the government at Ottawa. The new schedules considerably reduce the margin of toleration of error in railway track scales. They are as follows: Scales of 30 tons capacity must have sensitiveness when fully loaded of 10 pounds; greatest error not to exceed 15 pounds fully loaded; 40 tons capacity, sensitiveness must be 12 pounds and greatest error, 18 pounds; 50 tons capacity, sensitiveness must be 14 pounds, and greatest error 22 pounds; 75 tons capacity, sensitiveness, 17 pounds and greatest error 30 pounds; 100 tons capacity, sensitiveness 20 pounds, and greatest error 40 pounds; 150 tons capacity, sensitiveness 25 pounds, and greatest error 50 pounds; 200 tons capacity, sensitiveness 30 pounds, and greatest error 60 pounds.

The Coopersage Stock Trade for 1913 and 1914

By J. Innes

The output of cooperage stock for the year 1913 was considerably less than the output that we anticipate for 1914. Quite a large quantity of stock had been imported from the United States at high prices, and not always very satisfactory stock, to take care of the trade. This stock was brought in cheaper than normally, on account of the depression in the United States making prices very much less than the average.

The winter of 1912-13 was a very unfavorable one in Canada, from one to two weeks sleighing being all that the millmen had and the consequence was that the stocks of logs and bolts at the mills was small, some mills only running from 30 to 60 days.

The demand for cooperage stock in Canada, throughout the year was good while the apple barrel demand was below the average. Still everything that could be produced was used and stock had to be imported to supply the trade.

Prices throughout the year were about ten per cent. higher than in 1912, but owing to the limited production, very few mills made money, as the overhead expenses for twelve months had to be made on a short run.

The outlook for 1914 is very promising. Nearly all of the large consumers are placing heavier contracts than a year ago, at an advance of 10 to 15 per cent., according to the class of goods. The only unpleasant thing at the present time for the manufacturer is that the winter has been a very poor one and very little stock has been taken out. There is, however, practically two more months of winter yet to come and the millmen are in hope that they will get logging weather during the latter part of January and the whole of February and probably part of March. If mild weather continues, the output will be very limited.

Elm staves, basswood and soft maple heading and elm hoops are still favorite goods for all classes of barrels but hardwood staves are gradually working in on the market and there is likely to be more hardwood staves produced in Canada this year than ever before. As soon as the manufacturers have learned to make these staves in a satisfactory manner, there is no doubt that they will take the place of elm to a very great extent and prove satisfactory.

Birch heading is now being used considerably and is being made in first class shops. Nothing has yet been found to take the place of elm hoops in a satisfactory manner, although for some purposes wire or iron hoops are being used, where the packages do not require strength to prevent the contents being crushed. For export, for articles that are liable to be damaged, elm hoops are still the prime necessity.

Every indication at the present time promises a good business throughout the year in Canada and millmen are inciting themselves to try and get in a good supply of barrels.

Graddon & Owens, dealers in lumber and timber, 11 St. Sacrament Street, Montreal, P.Q., have sent out an attractive calendar for the year 1914, the picture upon which represents an imposing "Monarch of the Forest." The picture is in a rich sepia and is mounted upon a buff colored board, making a very pleasing effect.

Mr. W. S. Loggie and Mr. W. B. Snowball, of Chatham, N.B., visited Toronto on business during the third week in January.

The Hepburn Scotch Derrick

Among the many labor-saving devices adopted by the lumbering trade of recent years the crane and derrick possibly takes foremost place in the handling of heavy logs and timber both in woods operations and at the sawmill. This work used to be done by the man on the job and the result was that accidents and mishaps were very frequent. The introduction of the derrick has resulted in the practical elimination of these accidents and a great saving in labor as well. One of the best known manufacturers of this line in Canada is John T. Hepburn, Limited, Toronto. The Hepburn model Scotch derrick has built a reputation for this firm from coast to coast. In the manufacture of their derricks each operation, from the moulding of the castings to the assembling of the parts, is watched over with the greatest care, while only the finest and most dependable materials are employed in their construction. All parts are easily and quickly replaced, being stock and standard sizes. Derricks range in size from $\frac{3}{4}$ ton upwards. Sizes up to four tons are either in stock or in course of construction while sizes larger than four tons are made specially to order. Logging contractors and sawmill operators who have used the Hepburn derrick state that they are more than satisfied with them as they are especially adapted to the peculiar needs of the sawmill trade. Those interested should write the John T. Hepburn Limited, for their catalogue showing all sizes and styles in cranes and derricks.

Smart Woods Issue Unique Calendar

A unique calendar has been issued this year by Smart Woods, Limited, of Ottawa, Montreal, Toronto and Winnipeg, manufacturers of lumbermen's and contractors' supplies, tents, flags, awnings, tarpaulins and clothing. The calendar is an exact reproduction of the Dominion Ensign, both as to shape, size and color effect. Over the front of the ensign is suspended by a chain, a large shield on which appear the calendar pads. It is most attractive and unique and there has been a great demand for them from all parts of the country.

Preston Woodworking Machinery Company Busy

The Preston Woodworking Machinery Company, Limited, report that their plant is very busy and experiencing an active trade. Reports which have recently appeared of the closing down of a plant of a similar concern at Preston, Ont., have some times been misinterpreted, leading to an impression that the company referred to is the Preston Woodworking Machinery Company, Limited. For this reason the Preston Woodworking Machinery Company, Limited, are anxious to make the fact known that their plant is running along briskly.

Simonds Company Open New Office

The Simonds Manufacturing Company, with factories at Fitchburg, Mass., and Chicago, Ill., opened a new office, on the first of the year, at 209 Madison Ave., Memphis, Tenn. A complete stock of Simonds saws suitable for that territory, Simonds planer knives and files will be carried at the new store. The Memphis branch is under the management of Mr. William L. Mayer who formerly represented the company among the mills in Virginia and North Carolina.

THE HARRIS ABATTOIR CO., LIMITED

TORONTO - CANADA



The above is a cut of THE HARRIS ABATTOIR COMPANY'S NEW PLANT at the Union Stock Yards, West Toronto. It is the LARGEST AND BEST EQUIPPED Packing House in Canada.

We specialize in supplying the Lumber Trade

Our BARRELLED MEATS, LONG CLEAR, PURE LARD, and "DOMESTIC" SHORTENING are unsurpassed for "KEEP OVER" purposes.

Wire, write or phone us at West Toronto, or our nearest Branch before buying :

Live Stock,
Fresh Meats,
Cured Meats,
Barrelled Beef,
Pure Lard,
"Domestic" Shortening,
(Lard Compound)

Sausages,
Butter,
Cheese,
Eggs,
Mincemeat,
Vegetables,
Fish, etc.

—Agencies at—

SCHREIBER, ONT.
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OPPORTUNITIES

WE own and offer for sale on attractive terms a few especially well selected tracts of timber running from 50 million to one billion feet that are ready for immediate operation, having a good local demand at high prices.

The timber on the Pacific Coast is the last stand of the great forests. Well selected timber in British Columbia is the best investment on this Continent and offers especially attractive inducements for manufacturers.

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Dressed and in the Rough

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Board of Trade Building, MONTREAL

New **RAILS** Relaying
12 to 80 pounds per yard.

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Jno. J. Gartshore

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EDGINGS

Ontario

A fire occurred at the planing mill and lumber yard of A. Coates & Sons, Burlington, Ont., early in the morning of January 27th and caused heavy loss.

The Sutherland, Innes Company, Limited, Chatham, Ont., are considering plans for the erection of a cooperage plant at Corinth, Ont., at a cost of \$30,000.

The sawmill plant at Rainy River, Ont., formerly owned by the Rainy River Lumber Company is being taken down and shipped to Ludlow, B.C., where it will be set up and operated.

The Lusty Lumber Company, Rodney, Ont., whose mill was recently destroyed by fire, and who installed a portable mill to cut the stock they had on hand, report that they do not expect to erect a permanent mill.

The Holt Timber Company, Whitestone, Ont., report that they sold all their logs during 1913 and did not manufacture any lumber. They intend to manufacture about 9,000,000 feet, mostly white pine, during 1914.

Wm. Ellery, Fenelon Falls, Ont., reports that his plant is now practically ready to saw lumber again. He is considering the installation of a small double edger, also a 15 h.p. portable engine to assist his stationary engine in its drive.

The Empire Lumber Company whose mill is located at Latchford, Ont., have decided to close the mill. The company did not manufacture any lumber last year. They are now making arrangements for the disposal of the mill, which probably will be sold.

The office of the Schuster Coal & Lumber Company at Belleville, Ont., was recently destroyed by fire which caused a total loss of \$30,000 to the Schuster Company's block in which its own office and a number of others were located. The insurance is reported at \$14,000.

The Canadian Handle Company, Oxford Street, Strathroy, Ont., are arranging to erect a handle factory at a cost of \$50,000 on Oxford Street, Strathroy, Ont., to replace the building recently destroyed by fire. The company will be in the market for woodworking machinery.

The French River Lumber Company, Limited, has been granted a charter with a share capital of forty thousand dollars and headquarters in Toronto. H. E. Hurlburt is one of the principal men in the new concern, which is empowered to carry on lumbering and timber operations in all branches.

Aird Island Logging and Trading Company, Limited, has been incorporated with a capital of \$10,000, with head office at Spanish Mills, Ont., to carry on business as lumber merchants. The provisional directors are R. McKay, D. I. Grant, M. MacDonald and G. Adams, all of Toronto, Ont.

The Sutherland, Innes Company, Limited, Chatham, Ont., have purchased the plant and timber limits of W. M. Drader, of Chatham, Ont. They expect that this will increase their output to the extent of about 6,000,000 staves, 3,000,000 to 4,000,000 hoops and 500,000 sets of heading annually.

"Woodworkers Limited" have been incorporated, with head office at Toronto and capital of \$40,000. Those interested are L. J. Strickland, 555 Huron street, Toronto; A. B. Beverley, 17 Westminster avenue, Toronto, and P. E. Heeney, Berlin, Ont. The company will deal in lumber and carry on a woodworking and planing mill business.

The Ontario Transportation and Pulp Company, Limited, has been incorporated with a capital of \$10,000, with head office at Thorold, Ont., to carry on a water transportation business and operate as lumber merchants. The provisional directors are R. R. McCormick, Chicago; Warren Curtis, Jr., and G. S. Brack, and F. A. Dean, Jr., all of Thorold, Ont.

The Lakes Timber Company, Limited, has been granted a charter, with a capital of \$50,000 and head office in Fort Frances, Ont. The company is to cut timber and to manufacture and sell wood and timber products and carry on the business of lumbermen. The incorporators are William J. Law and Andrew A. D. Rahn, of Minneapolis, Minn.; Otto H. Diercks, of Rainy River, Ont.; Alonzo B. Colburn, of International Falls, Minn.; and William F. Zauke, of Spooner, Minn.

The Lumsden Lumber Company, Limited, has been incorporated, with capital stock of \$500,000 and head office at Ottawa. The well-known lumberman Mr. John Lumsden is managing director of this company. Its mill will be located at Amos, 140 miles east of Cochrane, Ont., and 349 miles from Quebec. Amos is on the Harricannaw river and the Transcontinental Railway. The company will erect, as soon as spring opens, a sawmill, planing mill, clap-board mill and tie mill. They will cut in the neighborhood of 20,000,000 feet per year in the sawmill. The stock will be red and white pine and spruce. Negotiations are now under way for the purchase of the machinery for the plant.

A fire which took place on January 13th caused serious damage to a number of woodworking and show-case manufacturing plants at 15 Fisher street, Toronto. The total damage was about \$60,000. The building was occupied by John W. Woolnough, show-case manufacturer; W. C. Peters, wood-turner; John W. Smith, wood-turner, and Parker Bros., novelty manufacturers. A few piles of lumber in the yard were also destroyed, and the office building belonging to Mr. Geo. G. Miles was slightly scorched. The adjoining buildings of the Toronto Woodworking Company, the E. R. Burns Saw Company and Rankin & Company, excelsior manufacturers, were also scorched. During the progress of this fire the death occurred of Mr. G. G. Miles from heart failure as reported elsewhere in this issue.

Eastern Canada

The sawmill belonging to W. Bleu at St. Zotique, P.Q., was recently destroyed by fire, the loss being \$15,000.

G. R. Marshall will install an excelsior plant at Stewiacke, N.S., in the early spring and will require to buy between 600 and 800 cords of poplar wood.

The Argenteuil Lumber Company, Limited, Morin Heights, P.Q., who recently lost their mill by fire have commenced the erection of an up-to-date sawmill. The equipment will include a steam log loader, nigger, gun-shot

feed, 8 ft. double cutting band saw, re-saw, double edger, slashers and trimmers. The company are also putting in machines for manufacturing clapboards and shingles, as well as planing machines. The plant will be completed and ready to operate by the first of May. The company report a fairly good season for logging. They are taking out 3,000,000 feet, chiefly spruce.

The sawmill and furniture factory of the Valliere Furniture Company, corner of St. Roch and Valliere streets, Quebec, P.Q., were recently destroyed by fire, the loss being estimated at \$100,000.

Fauteux, Limitee, has been incorporated with a capital of \$99,000, with head office at Verdun, Que., to carry on business as lumber merchants. The provisional directors are J. O. Fauteux, merchant, and H. Fauteux, builder, both of Verdun, Que.

J. H. Allard, Limited, have been incorporated, with head office at L'Epiphanie, P.Q., and capital stock of \$50,000, to carry on a general lumber business, with power to operate sawmills, planing mills, etc. J. H. Allard, Geo. Duford and J. E. Mageau, all of L'Epiphanie, are interested in the company.

The Fraser-Brook Lumber Company, Limited, has been incorporated with a capital of \$99,000, with head office at Fraserville, Que., to carry on business as lumber merchants and pulp manufacturers. The provisional directors are J. Langlais, advocate; J. E. Pineau and A. Lemieux, merchants, all of Fraserville, Que.; B. Frechette, timber merchant, St. Honore, and J. H. Rousseau, notary, of Trois-Pistoles, Que.

Two timber limits, one situated at Callieres South, seventeen miles, and the other Callieres North, twenty-eight and a half square miles, both located at Port aux Quilles, County of Charlevoix, were put up at auction in the offices of Messrs. La Rue & Trudel, accountants, yesterday morning, but were withdrawn from sale, the highest price offered for the limits being \$6,050. The limits in question, which include saw mill, equipped with machinery and 132 acres, more or less, freehold land, are the property of Mr. Herman Young, who it is understood, refused an offer of \$40,000 for them last year.

Good progress is reported in connection with the construction of the large plant of the St. Lawrence Pulp & Lumber Corporation, at Pabos Mills, P.Q., which when finished will represent an investment of close to a million dollars. There is an irregular group of buildings, mostly one-storey and measuring something like 900 by 200 ft. in plan, forming a complete pulp mill for making high grade bleached sulphite pulp, together with a digester building covering digesters reaching 160 ft. above the ground. All of this is now being built by the Aberthaw Construction Company of Boston, and is to be finished by next September. The buildings have concrete exterior, the interior structure being largely of structural steel with yellow pine roofs. There is to be an independent steam turbo-generator plant—giving power for both the pulp mill and a saw mill which is being erected separately. A private railroad is to supply the mill with logs from the extensive timber and pulp wood limits of the company, aggregating some 500 square miles. The Dominion Government has undertaken to develop a harbor for safe wharfage for ships up to 6,000 tons burden.

Western Canada

The Raymond-Comrie Lumber Company, Limited, has been incorporated with a capital of \$10,000, with head office at Saskatoon, Sask.

Baker and Pringle, Limited, have been incorporated with a capital of \$20,000, with head office at Collingwood East, B.C., to carry on business as lumber merchants.

W. E. Koch, who has a mill on the Slokan River, not far from Nelson, B.C., has completed a dam and timber flume, which cost about \$25,000. Logs are now being delivered.

The Ardley Lumber and Shingle Company, Limited, has been incorporated with a capital of \$15,000, with head office at Vancouver, B.C., to carry on business as manufacturers of lumber, shingles, etc.

J. Fyfe-Smith Company, Limited, has been incorporated with a capital of \$200,000, with head office at Vancouver, B.C., to acquire the business of J. Fyfe-Smith & Company, and carry on business as lumber merchants.

MacConnell Lumber Company, Limited, has been incorporated with a capital of \$50,000, with head office at Vancouver, B.C., to take over as a going concern the business of MacConnell & Company, and carry on business as lumber merchants.

Superior Sash and Door Company, Limited, has been incorporated with a capital of \$60,000, with head office at Vancouver, B.C., to acquire the business of J. E. Dougherty, New Westminster, B.C., and to carry on business as lumber manufacturers.

Contracts have been awarded by the city of Winnipeg to Benjamin Richardson & Company, Winnipeg, for 3,030 telephone poles at \$3,371 and to O'Brien, Fowler & McDougall Bros., Union Bank Bldg., Ottawa, Ont., for 100,000 No. 1 ties at 58c and 150,000 No. 2 ties at 52c.

A contract has been entered into between H. C. Struchen, of Minneapolis, and the city of Prince Albert, Sask., whereby the former will erect a pulp and paper mill on a free site of ten acres provided by the city. The latter is also to furnish Mr. Struchen with power from La Colle Falls at special rates on the understanding that the plant will be ready for operation by the time the power is developed. The city is to notify Mr. Struchen one year in advance of the date at which it will be ready to deliver power.

Mr. J. C. Shields, 212 Winch Building, Vancouver, B.C., recently purchased timber berth 554 on Spuzzum Creek, B.C., and is now making plans for operating the property. The berth includes several blocks of timber aggregating 4428.8 acres adjacent to holdings which he acquired previously in the same valley. The land is well timbered with fir and cedar of the coast type and the price paid was \$13,083, the upset price. The reason the berth went at the upset price was that there were no other interests already located in the valley. The purchase of this timber will enable Mr. Shields to operate on quite a large scale. If his present plans are carried out, Mr. Shields will install small portable mills at different places up the valley and flume the rough lumber and shingle bolts out to a finishing mill to be located on the C. P. R., on the east side of the Fraser River. The Canadian Northern Pacific Railway runs on the opposite side of the river and as the distance across is short at this point, it is expected that an overhead cable system could be used to advantage to transport lumber and shingles across to the C. N. R. Mr. Shields will commence his operations as soon as lumber market conditions warrant. The limits contain, it is estimated, sufficient timber to supply a mill of 75,000 feet daily capacity for over twenty-five years.

Lumber Wanted

Already sawn or to be sawn

Cuts of 1" and 2" Hemlock
Cuts of 1" and 2" Spruce
5/8" Cull Spruce or Norway
5/8" Merchantable Spruce
5/8" Merchantable Basswood
1" Cull Elm
1" Dead Cull Birch
1" Merchantable Birch, 3 to 5 feet long

Write us at once, giving estimates of quantities, best cash prices f. o. b. cars, shipping points, and full particulars of above kinds or of any other lumber you may have to offer.

Read Bros., Ltd.

Pine, Hemlock,
Spruce
and Hardwoods

Lumber and Lath
43 Victoria Street

Toronto, - Ont.

Pine

Red and White

Spruce

Lumber and Timber

Write for our Stock List.

We always have on hand a good supply of the above line — fine well seasoned stock.

Thos. Mackarell & Co.

Montreal

Ottawa

There is Big Money Cutting Cordwood



The Features of Kent's Cordwood Splitter

- 1 Conveyor of logs to saw.
- 2 Steam hold down.
- 3 Cut-off saw.
- 4 Conveyor from saw to splitter.
- 5 } Steam piston.
- 6 }
- 7 Steam head block.
- 8 Can be used as friction drive to carry wood out.
- 9 Vertical splitter.
- 10 Adjustable horizontal splitter.
- 11 Delivery table.

The new Kent Cordwood Splitter will turn small and rough timber, from which all logs suitable for lumber have been taken, into valuable cordwood. It will add millions of dollars to Canada's cut-over limits.

If you own or hold permits for any hardwood timber limits the Kent Cordwood Splitter can make big money for you. The machine is economical to operate and cheap to install.

The capacity of this invention has been demonstrated as 42 cords of 4 ft. cordwood per day of 10 hours with 11 men and one team. That means the timber cut, split and piled.

The cost of splitting hardwood has been reduced over 50 per cent. by this invention aside from the utilizing of timber that would be useless for any other purpose.

*This is an unusually interesting proposition—
we solicit your enquiries.*

Kent Cordwood Splitter Company

MEAFORD, ONTARIO

INVENTORY—

NOW THAT YOU HAVE COMPLETED YOUR STOCK-TAKING,

What about your **INSURANCE?**

LUMBER INSURERS GENERAL AGENCY

J. M. MOOREHOUSE, Manager
201 McIntyre Block, WINNIPEG, MANITOBA

E. D. HARDY, Canadian Manager
24 Central Chambers, OTTAWA, ONTARIO

W. S. JELLIFF, Manager
618 Corbett Bldg., PORTLAND, OREGON



Atkins' Inserted Tooth Cutoff Saw

McLean Pattern

A sensation in the Saw World. The smoothest cutting saw. Requires less hammering. Wears longer. Necessary set is in the teeth. No change in diameter of Saw. Teeth do not break out. Short teeth, holds Tension. Made in sizes from 20 to 86½ inches. 9 to 5 gauge.

*Order now if you expect shipment within sixty days.
Our capacity already overtaxed. Manufactured exclusively by*

E. C. Atkins & Company

Makers of Sterling Saws

Factory, Hamilton, Ont.

Vancouver Branch, 109 Powell St.

MERRITT MFG. CO., Lockport, N.Y.

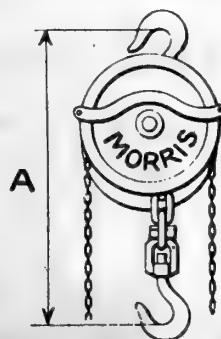
Veneer Machinery

THE "MERIT" LINE of Veneer Cutting, Dimensioning and Drying Machinery is designed first, for veneer mills cutting high grade furniture and commercial veneer from expensive timber, and second, for basket, crate, box and barrel factories using cheaper veneer cut from the less expensive woods.



Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.



THIS IS ONE OUT OF 81 TYPES OF MORRIS CHAIN-BLOCKS — ONE SIZE OF 219—AT YOUR SERVICE.

THE HERBERT MORRIS CRANE & HOIST CO.

LIMITED,

EMPRESS WORKS,
PETER STREET,
TORONTO, ONT.

BRANCH OFFICE,
CORISTINE BLDG.,
MONTREAL, QUE.

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Brake Your Load and Save Your Horses

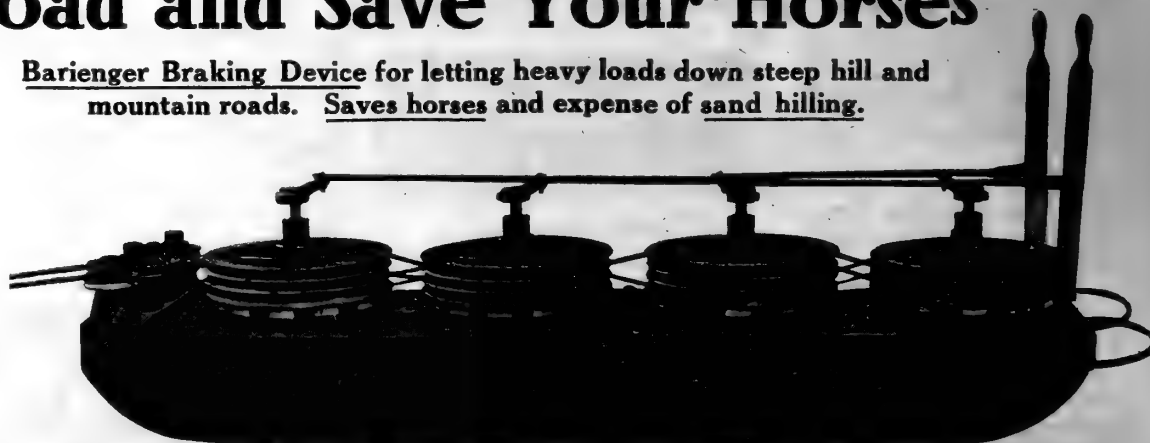
Besides avoiding accidents and eliminating sand hilling this braking device can greatly reduce your hauling costs. Larger loads may be handled and fewer men employed.

Our catalogue fully explains

Ryther & Pringle Co.

Carthage, N. Y.

Barienger Braking Device for letting heavy loads down steep hill and mountain roads. Saves horses and expense of sand hilling.





GOODHUE BELTING



FACTORY TO YOUR MILL

TO the saw mill and woodworking industries we offer an unusually good belting value in our "Acme Waterproof." This belting is specially made from the best hides to run in wet places where only the best quality belt can "make good." If you require any belting you should enquire into the merits of "Goodhue Belts" then you will buy a "Goodhue."

According to the conditions under which a belt has to run we recommend "Extra," "Standard" or "Acme Waterproof"—each brand the best quality but each made for a different service.

Send for particulars and prices

J. L. GOODHUE CO., LIMITED, Danville, Quebec

GET 20 PER CENT. MORE LUMBER FROM YOUR LOGS

by using our

Patent Steel Band Mill and Carriage

Results from logs of given dimensions cut on Breeze, Denison & Co. pat. band mill.

Diam.	Log Length	Feet Lum.
8 in.	16 ft.	45
10	12	54
10	16	69
11	15	96
14	16	171

This result was attained by different users of our mills during the season of 1912. We can prove to your satisfaction that this mill will cut more lumber and superior lumber than any other Band or Circular Mill on the market.

Special features of Mill

Concrete foundation not necessary. Frame constructed with brace bolted to same timbers which support base of mill. This prevents any movement of mill foundation throwing mill arbors out of cross line. Supporting timbers attached to track which prevents variation in cutting of boards.

Roller Bearing Carriage

designed to do away with lost side motion which is quite necessary for successful work in double cutting bands.

Double Action Friction Set Works

working on thin steel disc, which can be successfully used in place of usual foot friction in receding knees. This cuts down weight in pinion shaft, therefore reducing momentum, so that it is beyond speed of setter to over set by rapid work. Carriage can be changed from high to low speed instantly and can be operated without passing saw more than six inches either way. Knee opening to 44 inches. Guide prevents any binding motion to the gip and will automatically raise when coming in contact with knot in timber. Guides adjustable when mill is running.

A Canadian Built Mill of superior manufacture.

Write us if interested

Manufacturers of
Patented Steel Roller Bearings, Sawmill Carriages;
Steel Band Mills, Portable and Stationary,
for 16 to 19 Gauge Saws; Automatic
Filing Machines (Swages)

BREEZE, DENISON & COMPANY

Newburgh, Ontario

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

Are your horses of use to you?

This seems an absurd question—and the answer is always
"Of course they are"—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	\$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic

1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz.

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.
----------------	---------------

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.



Good Lumber HORSES

Should be free from all blemishes

Use

ABSORBINE

for Wind Puff,
Capped Elbow,
Bog Spavin,
Thoroughpin,
Shoe Boil,
Curb, Enlarged
Glands and all
puffs and swell-
ings, Fistula,
Poll Evil,
Sprains, Con-
tracted Ten-
dons, Bruises,
Lameness of
all kinds.

ANTISEPTIC

You cannot get good work out of your lumber horses if they are lame, blemished, sore, sick or similarly unfit.

The animal with Swellings, Soft Bunches, Bog Spavins or any such blemish, whether lame or not, needs your attention.

ABSORBINE

is your own best friend—it relieves the horse of all pain, soreness and troublesome blemish. It makes the horse better looking, better working, more fit and of greater value to you.

You can work your horse at the same time. This is no new lotion but the tried and tested remedy of many years successful use.

Thousands upon thousands of horses which would have been ailing and sick and unsightly have been made fit and well—good workers and good lookers. What others have done with Absorbine you can do, too.

All enquiries on special cases answered without delay—full information and instruction on request.

Absorbine \$2.00 a bottle at druggists or delivered.

Manufactured only by

ABSORBINE

does not blister or remove the hair, never leaves scars or blemishes of any kind.

It is easy to apply and does not require the horse to be laid up.

Highly concentrated and only a few drops required at each application.

GERMICIDE

W. F. YOUNG, P. D. F.

424 Lyman's Bldg.

MONTREAL, CAN.

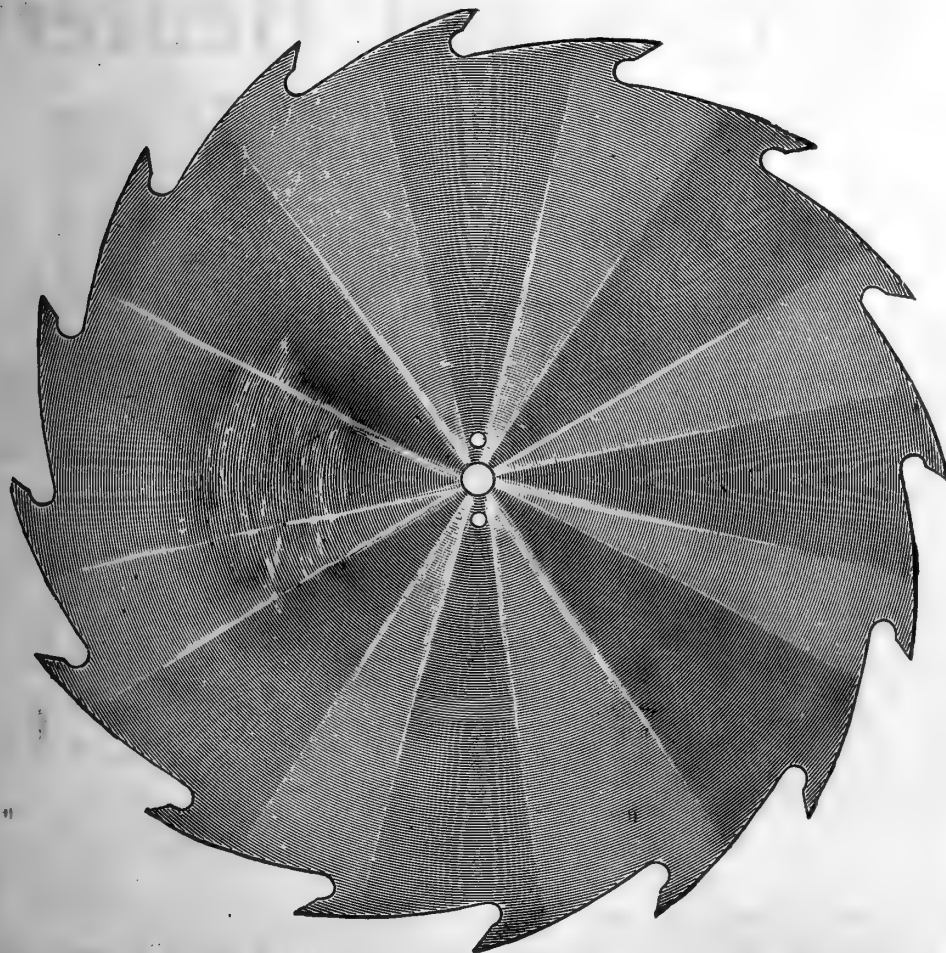
Radcliff Solid Tooth Saws

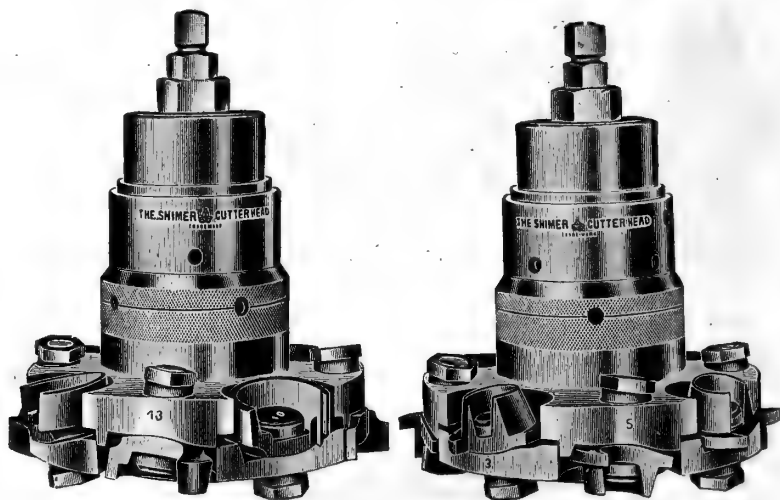
MADE by men who have made a special study of saw construction and steel tempering.

The steel in Radcliff saws is specially tempered to maintain a keen edge and high tension. It is sufficiently pliable to avoid breakage, yet rigid enough to be economical in effort.

Write for our catalogue of solid and inserted tooth saws, mill supplies, etc.

Radcliff Saw Mfg.
Company, Limited
Toronto





The Shimer "Limited" Cutter Heads, Figures 627 and 628 with Expansion

Why You Should Use The Shimer Cutter Heads

For Flooring, Ceiling, Siding, Ship Lap, Jointing, Double Ceiling, Doors, Sash, Blinds, etc.

Made of Steel Forgings, they represent the greatest possible strength in compact and workmanlike manner, embodying the vital principles of clearance to all leading Bit Points. The alternate and shearing effect of the cut reduces to a minimum the tearing-out tendency of cross-grained lumber. Cutters have exact shape in their exterior circles, and uniform product is maintained indefinitely without extra trouble or expense.

Send for Catalogue and Pattern Book. Address

SAMUEL J. SHIMER & SONS, Galt, Ont., Can.

Annihilate Scale



Potato Scale will positively remove scale from your boiler tubes and can do no injury to your pipes or fittings. Feed water should be regularly treated with Potato Scale to prevent scale, pitting, grooving and honeycombing; it saves fuel and so treats the water that it absorbs more steam.

Send us a gallon of feed water which we will analyze and then mix a sample of potato scale to suit your conditions—this is a free trial, write us.

C. C. Snowdon

Box 1384

Calgary, Alta.

Lumber Camp Ranges and Heaters

Our stoves are specially designed to meet all requirements of camp work.

We know exactly what is necessary and desirable in this class of stove.

We put into all our stoves the best of material and workmanship coupled with the best of expert experience.

The 'Leader Range' for coal and wood, shown in this cut is specially adapted to Lumberman Camps, Boarding Houses, Hotels and Railroad Construction Camp Work. We also make this Range with side hinge doors.

It is large, heavy and strongly built. Has good oven space and large heating surface. When a good, solid, reliable stove is wanted the 'Leader' will give satisfaction.

Write for our catalogue.

All Kinds of Stoves for Large or Small Camps



NO. 10-36A SIX HOLE LEADER RANGE AND RESERVOIR

ADAM HALL, Limited

-

Peterborough, Ontario

Manufacturers of Ranges, Heaters, etc., for Lumber Camps, Hotels, and Railway Construction

ENGINES and BOILERS

OF ALL TYPES AND SIZES

HEATERS, STACKS, RETORTS, TANKS

We cater specially to the lumbering industries

Write for Prices and Information

E. LEONARD & SONS

LONDON, CANADA

Agencies and Warehouses:—ST. JOHN, N.B. MONTREAL, QUE. TORONTO, ONT.
WINNIPEG, MAN. CALGARY, ALTA. VANCOUVER, B.C.



Locomotive Boiler on Skids

WE CAN
DOUBLE
THE CAPACITY OF YOUR
DRY KILN
GRAND RAPIDS VENEER WORKS

Dry Kiln Service

MEANS
TO
YOU

A Practical Theory
Competent Engineering
Effective Organization
Years of Experience
Guaranteed Results

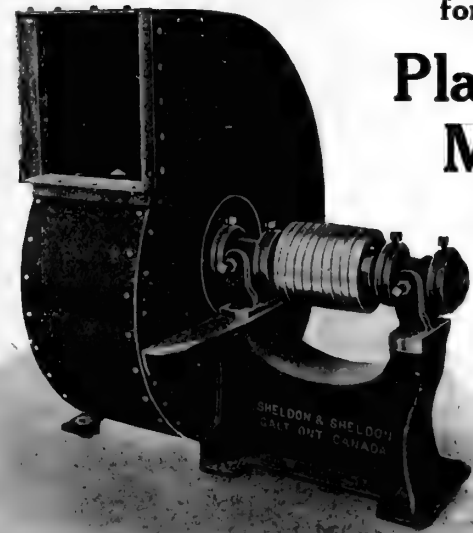
Grand Rapids Veneer Works

Grand Rapids,

Michigan

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

Messrs. Ross & Greig, 412 St. James St. Montreal, Que. Messrs. Walker's Limited, 259 Stanley St. Winnipeg, Man.
Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.



Griplock Riveted Chain Belt



Section of Griplock Riveted

No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis., a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

We would be very glad to mail you sample links for your inspection.

Sold by **The A. M. ELLICOTT CO., Montreal, Que.**
Elevating, Conveying and Transmission of all kinds a specialty

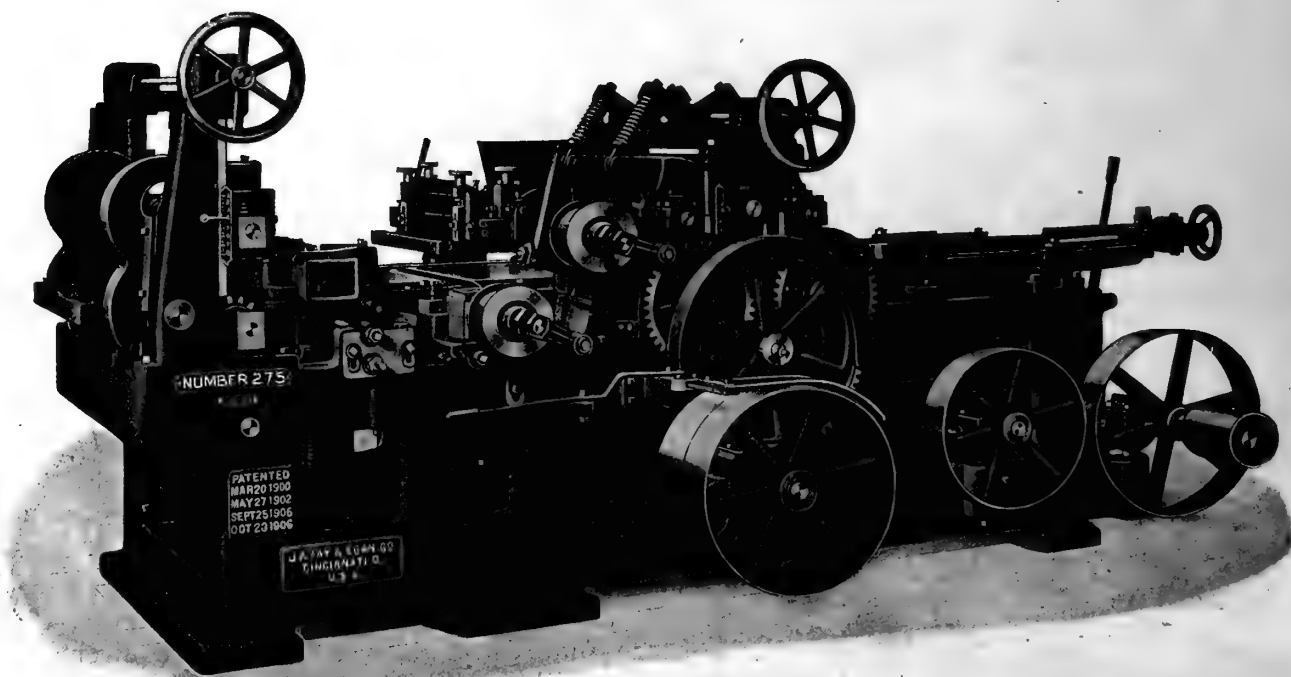
What I Can Do For The General Planing Mill

You don't have long runs on a few kinds of patterns, the kind that requires a "333" — your work is mostly short runs, different kinds, different sizes, different patterns—the kind that need me. Here's what I can do for you:

1. I will take care of all your matching and sizing up to 24" x 8".
2. I will do all your double surfacing up to my full rated width.
3. I will run all the flooring you need.
4. I will serve you as an inside moulder carrying formed cutters up to 1 1/4" projection.
5. I am readily accessible in every part, so that changes can be made quickly, easily and economically.
6. I have all the conveniences, all the time-saving adjustments and all the grade-raising value of the latest fast-feed matchers.
7. I have a mechanically perfect drive that makes every ounce of power count.
8. I run at a low operating cost, both for power consumed and upkeep expense.
9. I am medium in weight and size.
10. I am also medium in price, so that any mill can afford to put me in.
11. I am making money—big money—for hundreds of successful planing mill owners, men who, like you, are operating a general purpose mill.
12. I will do the same thing for you.
13. I invite you to write today—now—to my designers and builders.

J. A. FAY & EGAN CO.

465-485 W. Front St., Cincinnati, Ohio, U. S. A.



Educational Talks On Leather Belting by the

GRATON & KNIGHT MFG. COMPANY
WORCESTER, MASSACHUSETTS

To attain maximum efficiency and economy in your plant it is absolutely essential to know all possible about belting.

Leather Belting correctly installed and properly cared for is the most efficient and economical transmission medium.

Yet it is a well known fact that belting receives very little attention for such an important factor. For this reason we intend to publish in this paper a series of educational talks on belting, its selection, its care, etc. They will be "straight from the shoulder" talks, plain, instructive and authoritative.

Our Engineering Department is at your service, consult it freely concerning your transmission problems.

1851
G&K

Subject for next month:

"What Constitutes Good Leather Belting."

Unity Bldg.

46 St. Alexander St.

Montreal

Can.

Where Only "Efficiency Belts" are Manufactured.



CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:	
1 inch No. 1 cuts and better	\$55 00 57 00
1½ inch No. 1 cuts and better	64 00 68 00
2-in. No. 1 cuts and better	67 00 72 00
1½-in. No. 2 C. & B.	50 00 52 00
2-in. No. 2 cuts and better	56 00 60 00
4/4 No. 1 cuts	45 00 45 00
5/4 and 6/4 No. 1 cuts	52 00 52 00
8/4 No. 1 cuts	55 00 55 00
4/4 No. 2 cuts	36 00 36 00
5/4 and 6/4 No. 2 cuts	42 00 42 00
8/4 No. 2 cuts	45 00 45 00
4/4 No. 3 cuts	28 00 28 00
5/4 and 6/4 No. 3 cuts	32 00 32 00
8/4 No. 3 cuts	33 00 33 00
1-in. Good Shorts	40 00 45 00
1 x 4 and 5 com. and dressing	25 00 26 00
1 x 6 common and dressing	27 00 29 00
1 x 8 common and dressing	27 00 29 00
1 x 10 common and dressing	32 00 34 00
1 x 12 common and dressing	36 00 38 00
1 x 10 and 12 mill cull stocks	24 00 24 00
1-in. mill cull sidings	22 00 22 00
5/4 and 6/4 x 4 m.r., m.c. out.	26 00 26 00
5/4 and 6/4 x 5 m.r., m.c. out.	26 00 26 00
5/4 and 6/4 x 6 m.r., m.c. out.	28 00 28 00
5/4 and 6/4 x 8 m.r., m.c. out.	28 00 28 00
5/4 and 6/4 x 10 m.r., m.c. out.	33 00 33 00
5/4 and 6/4 x 12 m.r., m.c. out.	36 00 36 00
2 x 10 common	28 00 28 00
2 and 3 x 12 common	30 00 32 00
1 x 8 box and common	23 50 24 50
1 x 10 inch box and common	25 00 26 00
1 x 12 inch box and common	27 00 29 00
1-in. mill run sidings	25 00 27 00
1-in. mill run shorts	20 00 20 00
1-in. mill run Norway	23 00 23 00
2-in. mill run Norway	25 00 25 00
Norway, c. and cf. 1-in.	33 00 34 00
Norway, c. and cf. 1½-in.	35 00 36 00
Norway, c. and cf. 2-in.	35 00 36 00
Spruce mill culls	20 00 20 00
Hemlock No. 1:	
1x4 and 5-in. x 9 to 16 ft.	20 00 20 00
1 x 6-in. x 9 to 16 ft.	23 00 23 00
1 x 8-in. x 9 to 16 ft.	23 00 23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00 25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00 22 00
1-in. No. 2, 6-ft. to 16-ft.	17 50 17 50
2 x 4 to 12, 10 and 16 ft.	24 00 24 00
2x4 to 12-in., 12 and 14 ft.	24 00 24 00
2x4 to 12-in., 18 ft.	25 00 25 00
2 x 4 to 12-in., 20 ft.	28 00 28 00
2 x 4 to 12-in., 22 ft.	27 00 27 00
2 x 4 to 12-in., 24 ft.	23 50 23 50
2 x 4 to 12-in., 26 ft.	30 00 30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00 18 00
Clear in B.C. cedar, kiln dried.	55 50 65 50
Douglas Fir	
Dimension Timber up to 32 feet:	
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00 34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	34 50 34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00 35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 50 35 50
10x20, up to 32 ft.	36 00 36 00
6x18, 8x18, up to 32 ft.	36 50 36 50
6x20, 8x20, up to 32 ft.	37 50 37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.	
Fir flooring, edge grain	
No. 1 and 2 clear 1-in. Fir rough	44 50 45 00
No. 1 and 2 clear 1½, 1½ and 2-in. Fir rough	47 00 47 00
1½-in. No. 1 4-ft. pine lath	4 50 4 50
1½-in. No. 2 4-ft. lath	4 20 4 20
1½-in. 32-in. pine	1 80 1 80
1½-in. No. 1 4-ft. hemlock lath	3 75 3 75
1½-in. mill run hemlock lath	3 50 3 50
X pine or cedar shingles	1 05 1 05
XX pine or cedar shingles	2 25 2 25
XXX pine or cedar shingles	3 20 3 20
XXX B. C. cedar shingles	2 25 2 25
XXX 6 butts to 2-in.	3 20 3 20
XXXX 6 to 23-16-in.	3 40 3 40
XXXXX	3 60 3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00 60 00
Ash, white, No. 1 common	45 00 45 00
Ash, brown, 1sts and 2nds, 4/4	50 00 50 00
Ash, brown, common and better	39 00 39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00 60 00
Birch, 1sts and 2nds, 4/4	39 00 39 00
Birch, No. 1, com. and bet., 4/4	33 00 33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00 42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00 45 00
Birch, 1sts and 2nds, 16/4	50 00 50 00
Basswood, 1sts and 2nds, 4/4	40 00 40 00
Basswood, No. 1 com. and bet., 4/4	35 00 35 00
Basswood, No. 2 and 3, common	18 50 18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00 44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00 38 00
Basswood, 4/4, No. 2 com. and bet.	32 00 32 00
Soft elm, 1sts and 2nds, 4/4	40 00 40 00
Soft elm, No. 1 com. and bet., 4/4	34 00 34 00
Soft elm, No. 2 and 3, common	17 50 17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00 42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00 55 00
Rock elm, No. 2 com. and bet. 6/4 and	

8/4	37 00 37 00
Soft maple, 1sts and 2nds, 4/4	33 00 33 00
Soft maple, com. and bet., 4/4	28 00 28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00 35 00
Hard maple, 1sts and 2nds, 4/4	37 00 37 00
Hard maple, common and better, 4/4	30 00 30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00 46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00 70 00
Red oak, plain 1st and 2nds, 4/4	62 50 62 50
Red oak, plain 1sts and 2nds, 12/4	
and 16/4	75 00 75 00
White oak, plain, 1st and 2nds, 4/4	62 50 62 50
White oak, plain, 1sts and 2nds, 1½	
and 2-in.	70 00 70 00
White oak, plain, 1sts and 2nds, 12/4	
and 16/4	75 00 75 00
White oak, ¼ cut, 1sts and 2nds, 4/4	85 00 85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	
White oak, ¼ cut No. 1 common	55 00 55 00
Hickory, 1sts and 2nds, 4/4	70 00 70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00 75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:	
1-in. x 7-in. and up	\$53 00 55 00
1½-in. & 1½-in. x 8-in. & up	56 00 60 00
2-in. x 7-in. and up	58 00 65 00
No. 2 cuts 2 x 8-in. and up	40 00 45 00
Pine good strips:	
1-in.	40 00 42 00
1½-in. and 1½-in.	52 00 54 00
2-in.	52 00 55 00
Pine good shorts:	
1-in. x 7-in. and up	42 00 44 00
1-in. x 4-in. to 6-in.	32 00 35 00
1½-in. and 1½-in.	50 00 54 00
2-in.	52 00 54 00
7-in. to 9-in. A sidings	25 00 27 00
Pine, No. 1 dressing sidings	30 00 33 00
Pine, No. 1 dressing strips	29 00 30 00
Pine, No. 1 dressing shorts	22 00 26 00
Pine, 1-in. x 4-in. s.c. strips	22 00 23 00
Pine, 1-in. x 5-in. s.c. strips	24 00 25 00
Pine, 1-in. x 6-in. s.c. strips	23 00 24 00
Pine, 1-in. x 7-in. s.c. strips	23 00 24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00 27 00
Pine, 1-in. x 10-in. M.R.	28 00 29 00
Pine, s.c. sidings, 1½ and 2-in.	30 00 33 00
Pine, s.c. strips 1-in.	20 00 22 00
1½, 1½ and 2-in.	24 00 26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00 20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00 22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00 22 00
Pine, s.c. shorts, 6' 11' 1"x10"	24 00 25 00
Pine, box boards:	
1"x4" and up 6' 11'	16 00 18 00
1"x3" to 6", 12' 16'	17 00 19 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	
	17 00 19 00
Pine mill culls stock 1 x 12	21 00 22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00 18 00
O. culls r & w p	14 00 16 00
Red pine, log run:	
mill culls out, 1-in.	18 00 20 00
mill culls out, 1½-in.	19 00 21 00
mill culls out, 1½-in.	19 00 21 00
mill culls out, 2-in.	22 00 24 00
Mill run Spruce:	
1"x4" and up, 6' 11'	17 00 18 00
1"x4" and up, 12' 16'	18 00 20 00
1"x9" 10" and up, 12' 16'	22 00 24 00
1½"x7" 8-9" and up, 12' 16'	22 00 24 00
1½"x10" and up, 12' 16'	22 00 24 00
1½" & 2"x12" and up, 12' 16'	25 00 26 00
Spruce 1-in. clear (fine dressing and B)	
	25 00 25 00
Hemlock 1-in. cull	13 00 15 00
Hemlock 1-in. log run	17 00 20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00 23 00
Tamarac	19 00 20 00
Basswood log run, dead culls out	
	22 00 24 00
Basswood log run mill culls out	23 00 26 00
Birch log run	19 00 22 00
Soft elm, common and better, 1, 1½, 2-in.	
	20 00 24 00
Ash, black, log run	25 00 28 00
1 x 10 No. 1 barn	33 00 36 00
1 x 10 No. 2 barn	23 00 26 00
1 x 8 and 9 No. 2 barn	22 00 23 00

No. 1 white pine 1½-in. x 4-ft.	4 00 4 35
No. 2 White Pine	3 80 3 95
Mill run white pine	4 00 4 25
Spruce, mill run 1½-in.	3 00 3 25
Red pine mill run	3 25 3 80
Hemlock, mill run	2 75 3 00
32-in. lath	1 80 2 00
Pine Shingles	
xxxx, 18-in.	3 00 3 50
Clear butt, 18-in.	2 50 3 25
xx	1 75 1 75
White Cedar Shingles:	
xxxx, 18-in.	3 75 4 25
Clear butt, 18-in.	3 00 3 50
18-in. xx	2 00 2 00
Spruce logs (pulp)	13 00 15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70 75
Oak—Michigan and Ohio	
By the dram, according to average and quality	65 72
Elm	
By the dram, according to average and quality, 40 to 45 feet	80 90

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 22
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in, 8 in. and up wide 62 00
1½ and 1½ in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in, 8 in. and up wide 42 00
1½ in, 8-in. and up wide 55 00
1½ in, 8-in. and up wide 57 00
2 in, 8-in. and up wide 60 00
2½ and 3 and 8-in. and up wide 75 00
4 in, 8-in. and up wide 85 00

No. 2 Cuts

1 in, 6-in. and up wide 31 00
1½ in, 6-in. and up wide 42 00
1½ in, 6-in. and up wide 44 00
2-in, 6-in. and up wide 47 00
2½, 3 and 4 in, 6-in. and up wide 62 00 65 00

No. 3 Cuts

1 in, 6-in. and up wide 24 00
1½ and 1½ in, 6-in. and up wide 33 00
2-in, 6-in. and up wide 33 00
2½, 3 and 4-in, 6-in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 13 in. and up 34 00
1½, 1½ and 2-in. 30 00

No. 1 Barn

1 inch 31 00 45 00
1½, 1½ and 2-in. 36 00 45 00
2½ and 3-in. 45 00 50 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1½, 1½ and 2-in. 30 00 36 00
2½ and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1½, 1½, 2-in. 20 00 25 00

Box

No. 1, 1, 1½, 1½, 2-in. 22 00 25 00
No. 2, 1½, 1½, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1½, 1½ and 2-in. 20 00
No. 2 17 00 18 00

Lath

No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimensions, Rough or S. 1 S. and 1 E.
6 ft. 8 ft. 10 ft. 14x16 ft.
2 x 4 15 00 18 00 22 00 20 00
2 x 6 18 00 18 00 22 00 20 00
2 x 8 18 00 18 50 22 00 20 00
2 x 10 19 00 19 50 22 50 21 00
2 x 12 19 00 20 00 24 50 22 50

PINE, SPRUCE, TAMARAC & LARCH

Mountain Stock

Dimensions

2 x 4-12 20 50
2 x 4-8-14-16 20 50
2 x 4-10-18-20 22 50

2 x 6, 8 to 16 20 00
2 x 8, 8 to 16 20 50

No. 1 Common Boards

4 inch \$18 50
6 inch 21 00
8 inch 23 00
10 inch 23 00
12 inch 23 00

Flooring

4 or 6 inch No. 1 \$33 00
4 or 6 inch No. 2 31 00
4 or 6 inch No. 3 24 50

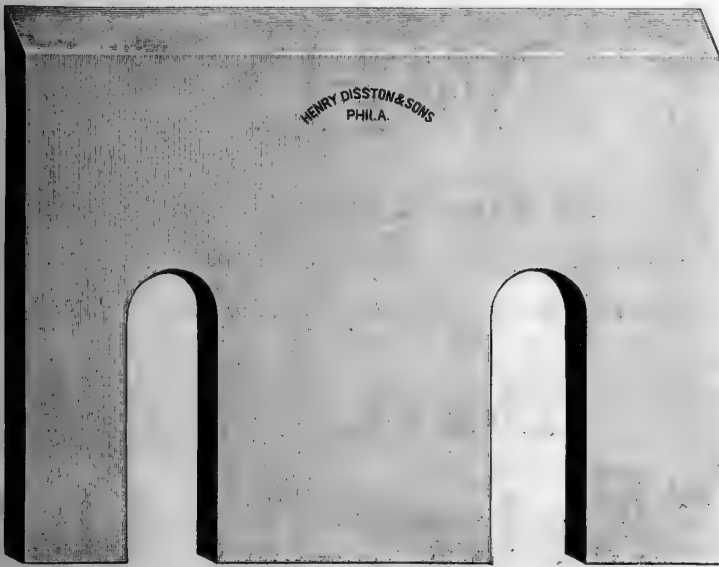
Shiplap—Finished

4 inch \$20 00
6 inch 22 50
8, 10, 12 inch 23 50

Siding

6 inch No. 1 \$33 00
6 inch No. 2 31 00
6 inch No. 3 24 50

Lath



Disston Planer Knives are Best



*Send for Descriptive Booklet on Machine Knives
Free on Request.*

**A Knife that will hold
its Cutting Edge the
Longest Possible Time**

Disston Hog Knives

- cannot be equalled because they are made of a special, oil tempered, tough Disston Crucible Steel, that will hold its edge—an absolute requisite with these knives owing to the severe work they are called upon to do.

The steel is the foundation upon which rests all subsequent work. We have manufactured our own steel for 59 years, which enables us to watch it closely and maintain a uniform high quality.

We make knives of either solid or laid steel, as desired. Our line is complete and we can fill any order you give us.



Reg. U. S. Pat. Off.

**Henry Disston & Sons,
Limited**

Keystone Saw, Tool, Steel and File Works

TORONTO, CANADA

Branch at Vancouver, B. C.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	43 00
No. 1 Barn 1 x 6 and 8	34 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24

RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22

SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22

BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23

PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00	55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00	40 00	

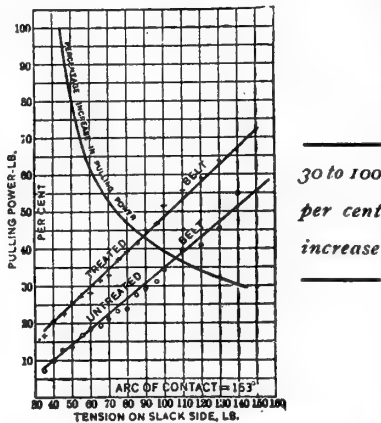
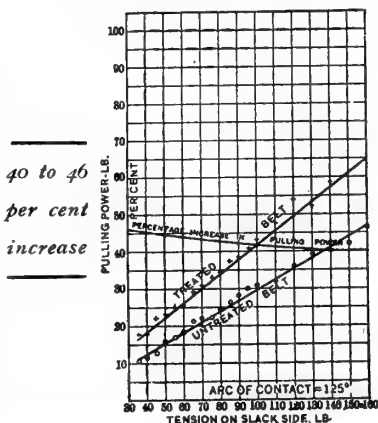
No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	
No. 1, 1 x 8	37 00	
No. 2, 1 x 12	40 00	42 00
No. 2, 1 x 10	35 00	36 00
No. 2, 1 x 8	34 00	35 00
No. 3, 1 x 12	32 00	33 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	29 00	29 00

Canadian spruce boards	25 00	26 00
Spruce, 10 in. dimension	28 00	28 00
Spruce, 12 in. dimension	29 00	29 00
Spruce, 9 in. and under dimen.	26 00	26 00
Spruce, 8 in. and under dimen.	25 00	25 00
10 and 12 in. random lengths, 10 ft. and up	26 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	21 50
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00	23 00

1 1/4-in. spruce laths	4 40
1 1/2-in. spruce laths	3 90

New Brunswick Cedar Shingles			
Extras	3 55	3 75	
Clears	3 25	3 40	
Second clears	2 75	3 00	
Clear whites		2 65	
Extra 1s (Clear whites out)		1 50	
Extra 1s (Clear whites in)		1 00	
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 65	
Red Cedar Eureka, 18-inch 5 butts to 2-in.		4 25	
Red Cedar Perfection, 5 butts to 2 1/4		4 80	
Washington 16-in. 5 butts to 2-in. extra red clear	3 50	3 60	

The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4 c. per ft. All F.O.B. Jamestown, New York.

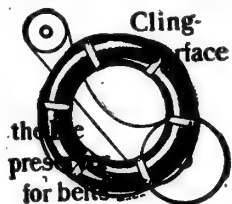


These Curves Show the Increased Pulling Power Produced by Cling-Surface

and as they were plotted by Robert Thurston Kent, M.E., you can know they are authoritative

Mr. Kent tested two new belts—one treated with Cling-Surface, and the other not. To make the test perfectly fair both belts were first driven side by side in a New Jersey factory. Then, by means of a testing frame built especially for the purpose, some weights, and a polished rigid pulley, the comparative tests indicated by these curves were made. The complete statement which Mr. Kent has prepared covering these tests is now printed in booklet form. If you

wish, as you should, to improve economy in and in connection with your belts, we will be pleased to mail you a copy. Cling-Surface stops slip; makes belts pliable, easy running, and long lived; waterproofs; and reduces friction. Cling-Surface is used all over the world with equal success—in the driest, wettest, hottest and coldest climates. Your order or inquiry will have our best and quickest attention. We quote f.o.b. Toronto.



Cling Surface Co

1021 Niagara St Buffalo N Y

New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 73

WHY?

Pay for Bags, Sacking, Freight, Handling, Cadging on light dirty oats, when the above items of cost are the same on

Heavy, Clean, "National" Oats

purchased direct from producers and shipped from our elevators in the heart of the best oat sections of the Western Provinces.

Write or wire for quotations

National Elevator Company, Limited

WINNIPEG, MANITOBA

Port Arthur, Ont.

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What a Test Proved



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs. (See how this Chain stretched before breaking.)

"Ajax" Loading Chain is made from special steel of highest tensile strength and toughest wearing qualities. Every link of "Ajax" Chain inspected before shipment, and every weld guaranteed perfect.

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Standard Chain Company

Pittsburgh, Pa.

The World's Largest Chain Producers.

Montreal: Alexander Gibb, St. Nicholas Bldg.

Winnipeg: Bissett & Loucks.

Vancouver: John Burns, 329 Railway St.

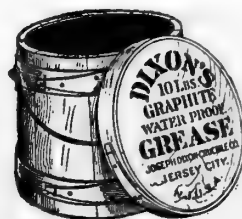
Automatic Knife Grinder and Saw Gummer

This combination machine will be a valuable addition to your plant and will pay for itself in a short time.

This is one of the many Automatic Knife Grinders and Saw Sharpeners manufactured by us.

Write for our complete catalog—it is yours for the asking.

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.

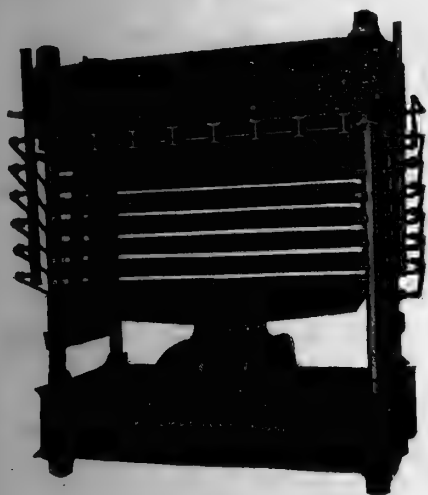
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Reduces the wear, and prevents the corrosion, which destroys wire rope.

The graphite penetrates to the innermost part of the cable, giving both internal and external lubrication. And it forms a rust-proof, acid-proof coating which protects the metal against corrosive action. Send for "Wire Rope Lubrication", No. 238.

Made in **JERSEY CITY, N.J.** by the
Joseph Dixon Crucible Company

Established 1827

**Veneer Press and Dryer**

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

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William R. Perrin and Company, Ltd.
TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

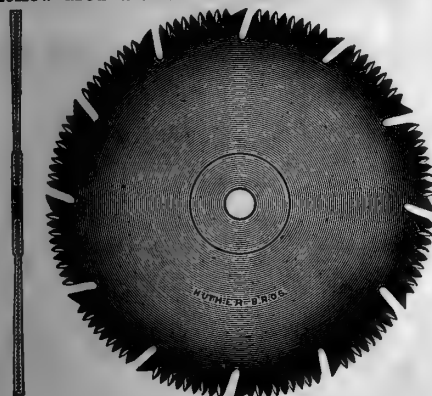
The Laidlaw Bale-Tie Co., Limited

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Harry F. Moulden & Son

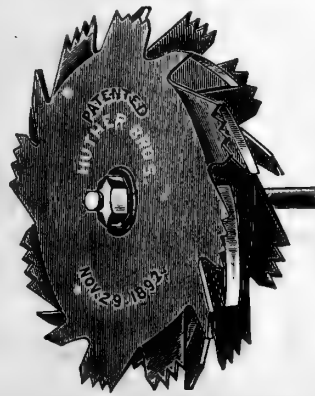
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George W. Laidlaw

HUTHER BROS.
Hollow Ground Combination Tooth Mitre Saw Patent Groover or Dado Head



For either Rip or Cross Cutting
Will cut equally as smooth in either Ripping, Cross-cutting or cutting at an angle of 45 degrees, with grain of wood.



Can be used on any Circular Saw Mandrel
For cutting any width groove from 1/8" to 2" wide. Will cut either with or across the grain. (Sent on approval).

Allow us to quote Prices on Saws for any special work that you wish to do.
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MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel**Boss Line Lumbering Tools**

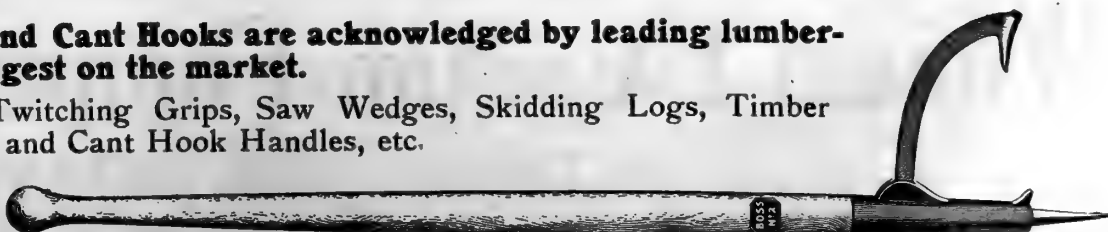
Manufactured by

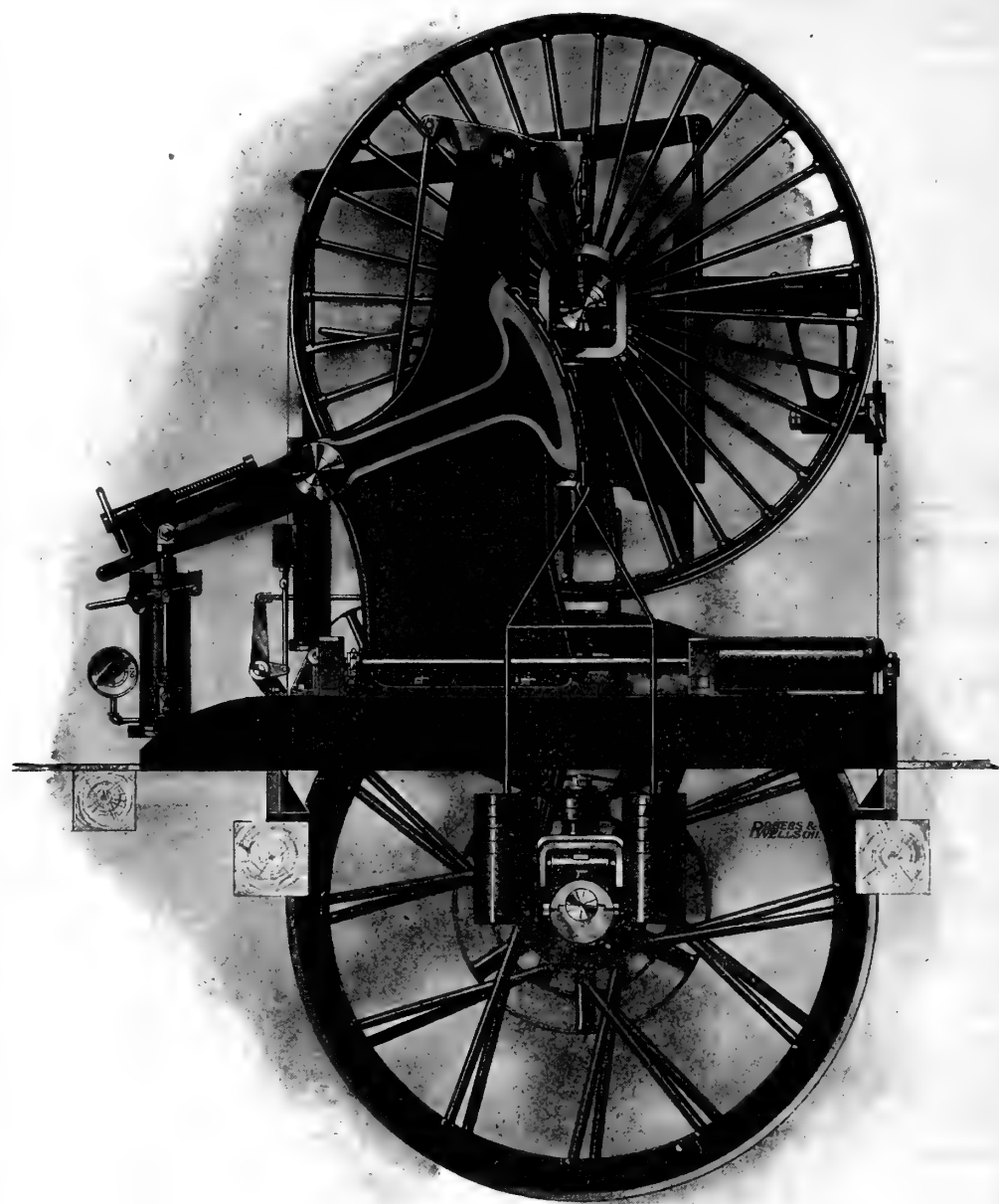
The McFarlane-Neill Mfg. Co., Ltd., St. Mary's, N. B.

Forged Steel Socket Peaveys and Cant Hooks are acknowledged by leading lumbermen to be the lightest and strongest on the market.

Try our Steel Loading Blocks, Twitching Grips, Saw Wedges, Skidding Logs, Timber Carriers, Split Rock Maple Peavey and Cant Hook Handles, etc.

Catalogues furnished and prices quoted on application





The Steam Tension Band Mill

THE top guide on this mill, as well as the upper wheel, is operated by a steam cylinder.

This means that the guide can be moved up or down instantaneously, which in one day's work means quite a saving of time over the ordinary mill. This goes a long way towards paying for the mill by the end of a year.

But this is not all—with this steam operated guide it is just as easy to keep the guide close to the cut as it is to set it for certain size logs and keep it

there. This can be done without loss of time, and so by bringing the guide down close to the cut, vibration of the saw is done away with and the quality of the lumber is improved.

No form of tension yet devised is as easy on the saws as the steam tension—several of the users of this mill have run through an entire season without cracking a single saw.

These are some of the reasons why our steam tension band mill is the most economical mill to buy, and there are others which you will find in our catalogue.

When you are tuning up your mill this winter for next season's operations, remember that we can serve you promptly whatever your requirements may be.

William Hamilton Company, Limited

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Get These Facts

WHAT you want is belting that will give you your money's worth in an absolutely dependable service.

It will take you about two minutes of your time to write our nearest house for straightforward facts that prove conclusively the unusual service of Leviathan Belting.

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Application of knowledge, as opposed to its mere acquisition, is what counts in the world of practical affairs.

Our knowledge of timber is practical; it has been applied; it is being applied steadily; it is

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Bear that fact in mind whether you desire to buy or sell timber lands.

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Morgan Machine Company

ROCHESTER, N. Y.

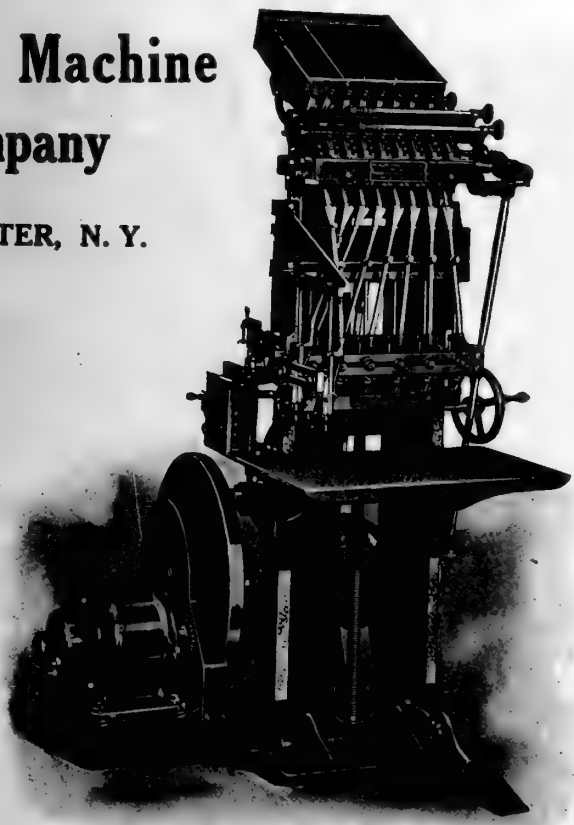
Manufacturers
of—

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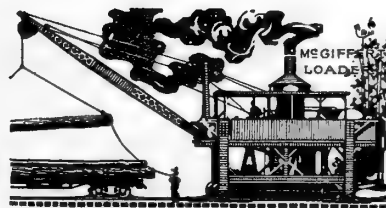
Box Board
Matchers,

Box Board
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Machines.

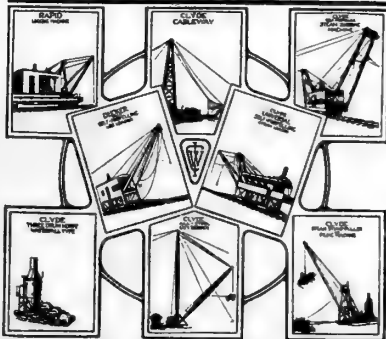


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.

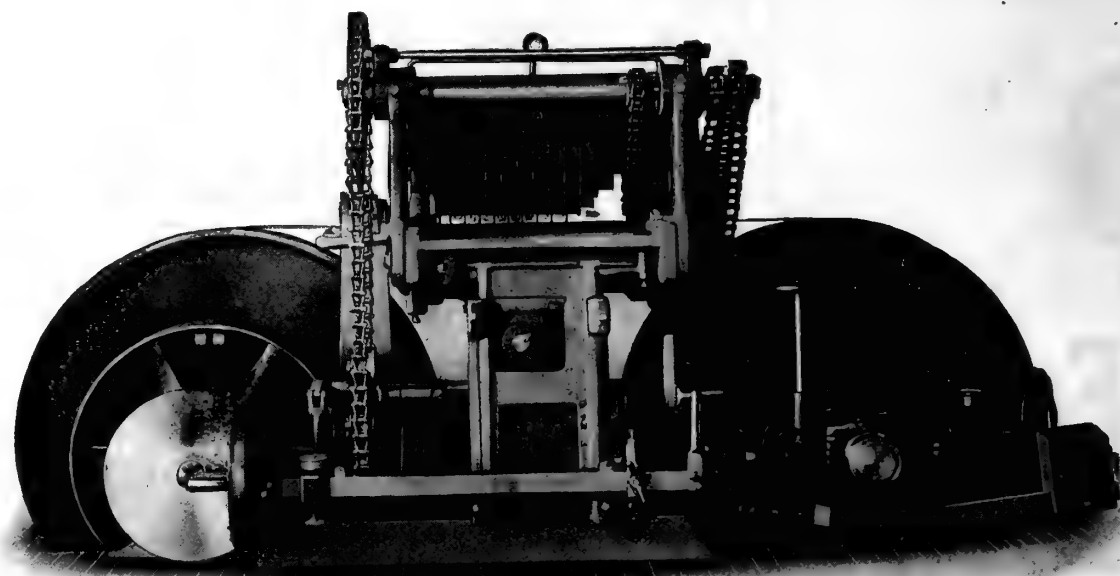


A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

LOGGING LOCOMOTIVES



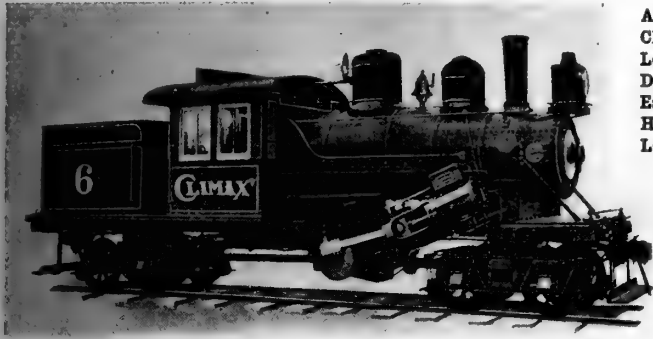
The locomotive illustrated was built for MacKenzie, Mann & Co., Contractors, Montreal, Canada, and represents the latest development in this type of locomotive:

It is suitable for logging contractors, quarries, mines and industrial service. It will haul 1,875 tons on level, and 160 tons on 3 per cent. grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Engine being operated by the Trout Creek Logging Co., Ltd.
of Trout Creek, Canada

Especially adapted
for heavy hauling
on steep grades,
sharp curves and
uneven tracks. For
logging, switching
and pulling on main
lines, mills, fur-
naces and indus-
trial purposes.

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**For Logging Operations**

OUR Logging and Industrial Locomotives are not mere engines from stock, but specially designed locomotives for logging use. They operate with a minimum of fuel consumption and can be relied upon to give steady service every day of the year. All parts are amply designed, lessening the possibility of breakage.

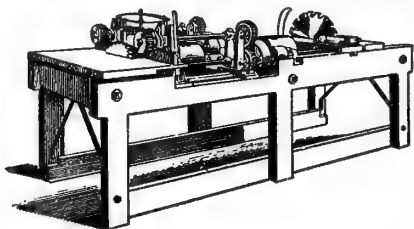
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Canadian Locomotive Co., Limited, Kingston

72,000 Lath Per Day With Our

"Superior" Lath Machine

the only Lath Machine with Self-oiling Boxes.



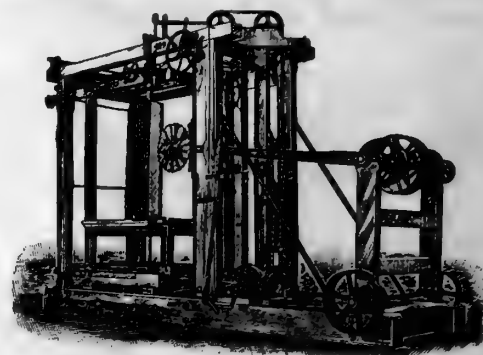
Write us for full particulars of this well-built and moderate-priced Lath Mill.

Enquiries and correspondence invited.

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson Mfg. Co.

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"Dunbar" Clapboard Machine

Here is a machine that will make clapboards out of lumber that cannot be profitably manufactured into anything else. It is guaranteed to take from 15% to 20% more out of the same lumber than the old style machine. Capacity from 5000 to 7000 per day according to quality of lumber.

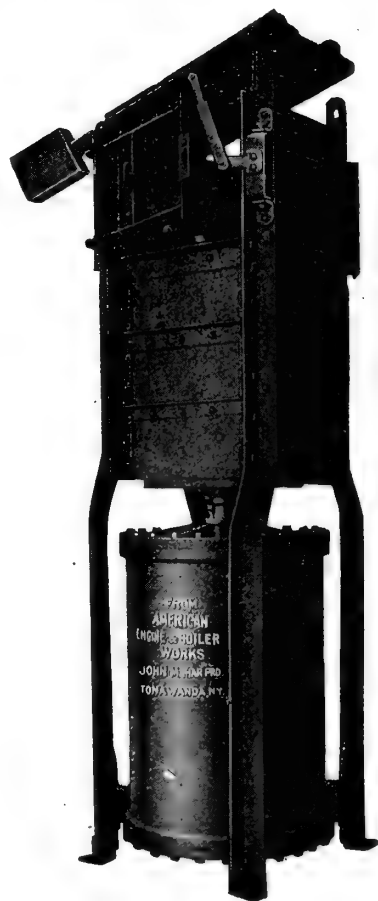
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Steam Press

THE American steam press is carefully designed and substantially built of steel. It is used for baling shavings, asbestos and many other materials.

The cylinder is 30" diameter by 45" high and the pressure maintained is from 60 to 100 lbs. according to the amount of material wanted in each bale.

For literature and prices — write us.

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JOHN MAHAR, Proprietor

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**Not altogether what we
say but what users say**

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.



"WAKE UP"

Rip Van Winkle slept for twenty years while the world moved on.

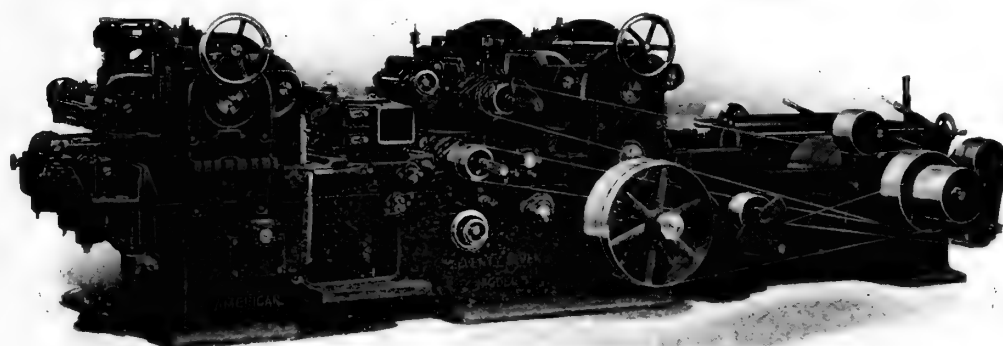
Of course, Rip never did anything of the kind literally. Irving used him to typify a class of New Yorkers who were direct descendants of the founders of New Amsterdam, who never progressed and of whom he was very fond of making fun.

To us Rip Van Winkle typifies a-Behind-the-Timer. You will find him in every business and in every walk of life. You'll find him in the lumber business—but he never uses a 77 Model 5 unless he "wakes up"

The new book on Model 5 will prove to you that no other Planer and Matcher equipment is so quite up-to-date as the American.

Let us send you a copy of the book.

Write the Sales Office Nearest You.



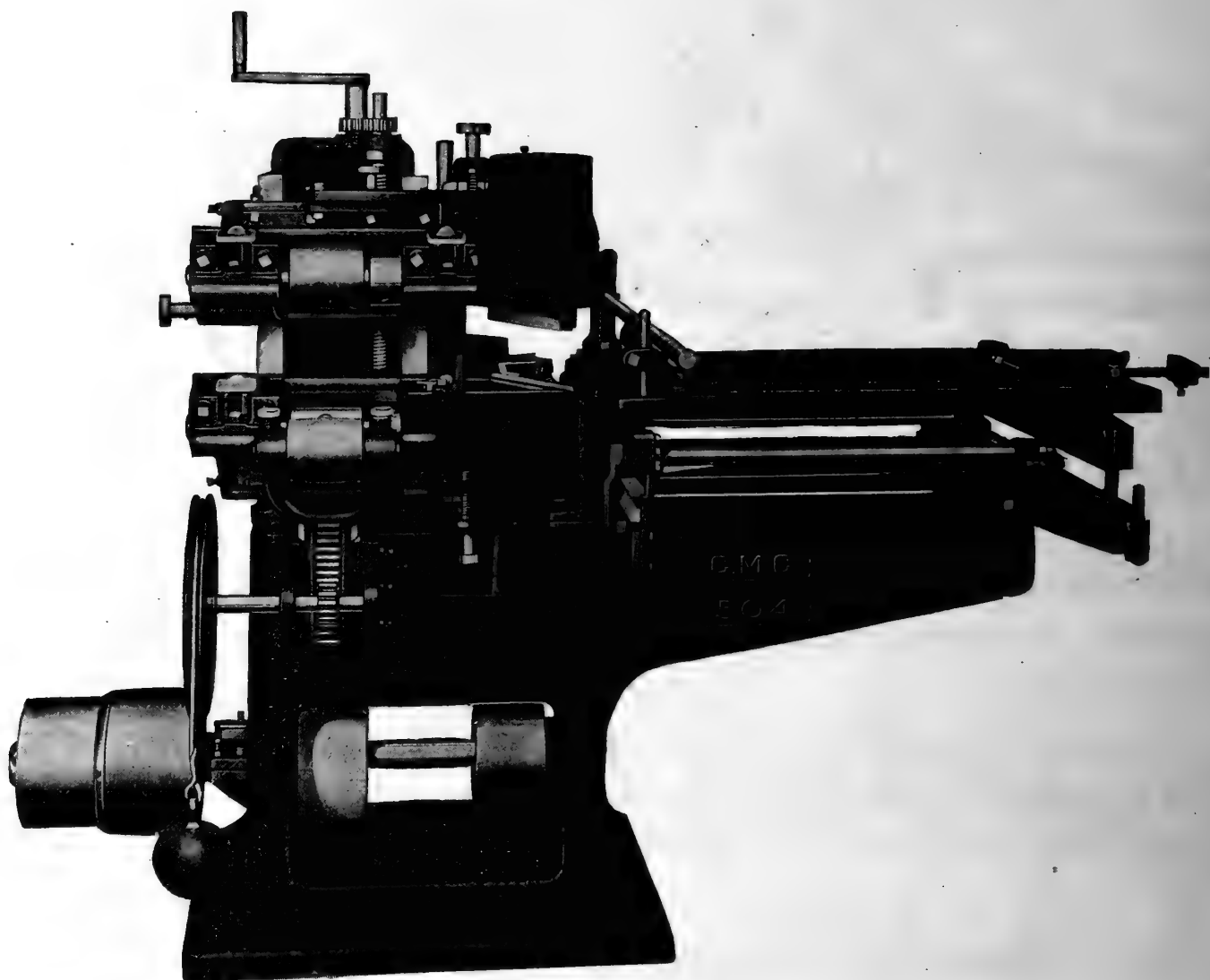
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TENONER**TENONER**

504 Tenoner with Double Copes

Your attention is directed to our new No. 504 TENONER. This machine has been on the market for a short time, in which OVER TWENTY have been sold and are giving universal satisfaction. In announcing this machine we offer a Tenoner in which every modern idea has been embodied. Our long experience with woodworking machinery has enabled us to build a Tenoner which will produce perfect work with great speed and ease of operation.

Machine can be supplied with single or double copes, or cut off saw, as desired.

Bulletin No. 504 detailing all the improvements which invite your investigation sent on request.

Canada Machinery Corporation, Limited
Galt, Ontario

Largest Builders of High Class Wood-Working Machinery in Canada

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbing (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot Overslab."

Wickes Brothers

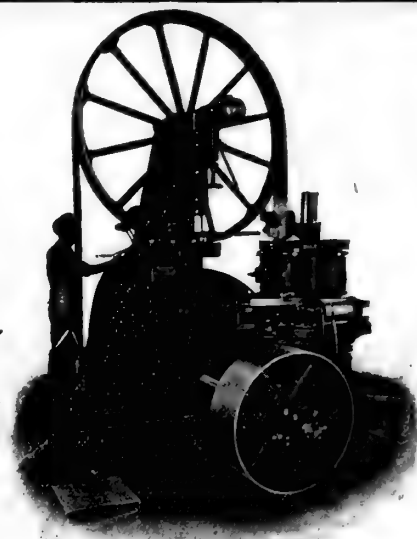
410 White Building — SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

THE VERDICT

A Special Line
BAND RESAWS

Mershon Resaws Are Preferred



Saginaw Seven-Foot Band Resaw

Wm. B. Mershon & Co.,
Saginaw, Michigan.

Grayling, Michigan,
November 5th, 1913.

Gentlemen :

Replying to your favor of the 1st inst., beg to state that we have used your band resaws for the past twenty-five years, and are happy to say the longer we use them the better we like them.

We have had other re-saws built by other manufacturers but **have decided that the Mershon Resaw is the only one that will supply our wants.**

We cannot find language strong enough to express our feelings about your resaw.

Yours very truly,
Salling Hanson Company.

Wm. B. Mershon & Company
SAGINAW, MICH.

THE PETER GERLACH CO.
MANUFACTURERS
AND BUILDERS OF

SAWS
CIRCULAR AND CYLINDER
MACHINERY
STAVE HEADING AND BARREL
TOOLS
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For the Manufacture of the following

STAVES
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BOTTOMS
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COMPLETE PLANTS
FOR THE MANUFACTURE OF

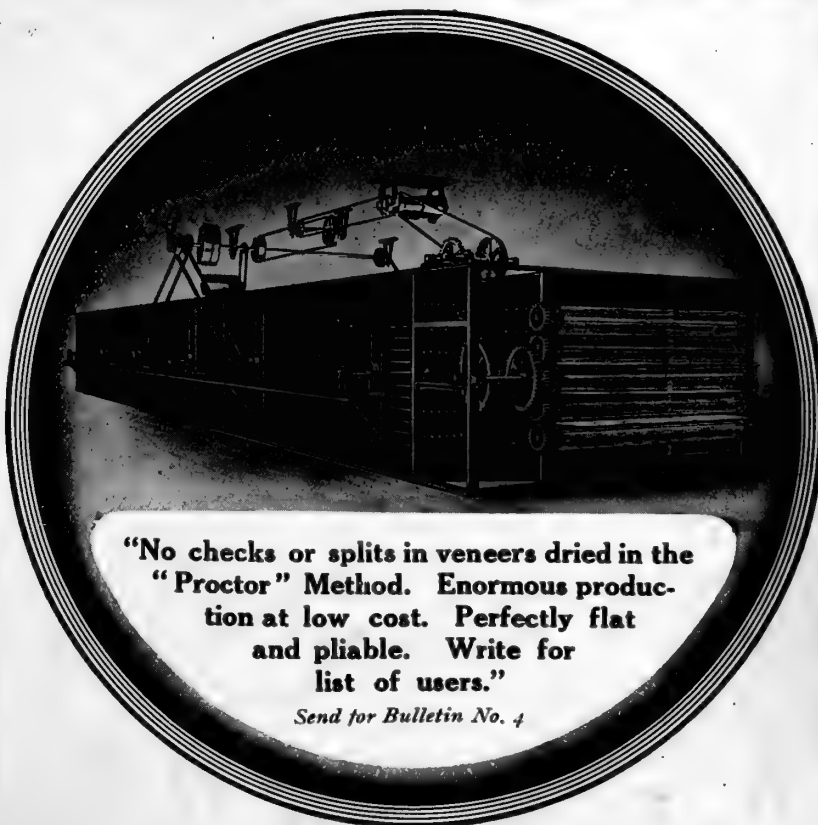
BARRELS, KEGS, STAVES AND HEADING
OUR SPECIALTY.

FOR PRICES AND FURTHER PARTICULARS,
ADDRESS

THE PETER GERLACH CO. CLEVELAND, O. U.S.A.



"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the
"Proctor" Method. Enormous produc-
tion at low cost. Perfectly flat
and pliable. Write for
list of users."

Send for Bulletin No. 4

THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.

The Mark*of Quality*

Why Our Model "D" is Superior

A Steam Feed Valve that sticks, leaks, or kicks, has no place in a mill—minutes are too valuable for that—but there are several points in addition to these that are well worth considering, as exemplified in our Model "D" horizontal valve.



Horizontal, Double Ported Steam Feed Valve, Model "D."

First, being horizontal, the valve can be double ported, which means that twice the steam opening can be obtained with the same motion.

Second, the horizontal valves can be connected to the sawyer's lever with 25 per cent. less joints and toggles than vertical valves, cutting out a lot of lost motion.

Third, by using our double bell crank, operating through differential arcs, we get a **quick opening** at the steam end, combined with a **slow closing** at the exhaust end, with the one motion of the lever.

These points all combine to **save time where time is lost—in reversing the motion.**

The construction is simple, there is no stuffing box to retard easy motion, and the valve plugs, of hollow construction, are so light and of such large surface that they cannot wear appreciably in the life of the average mill.

Two minutes a day, for one season, will pay for a pair of these valves. Not a bad investment, eh?

The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver
Gorman, Clancey & Grindley, Calgary and Edmonton

Represented by:

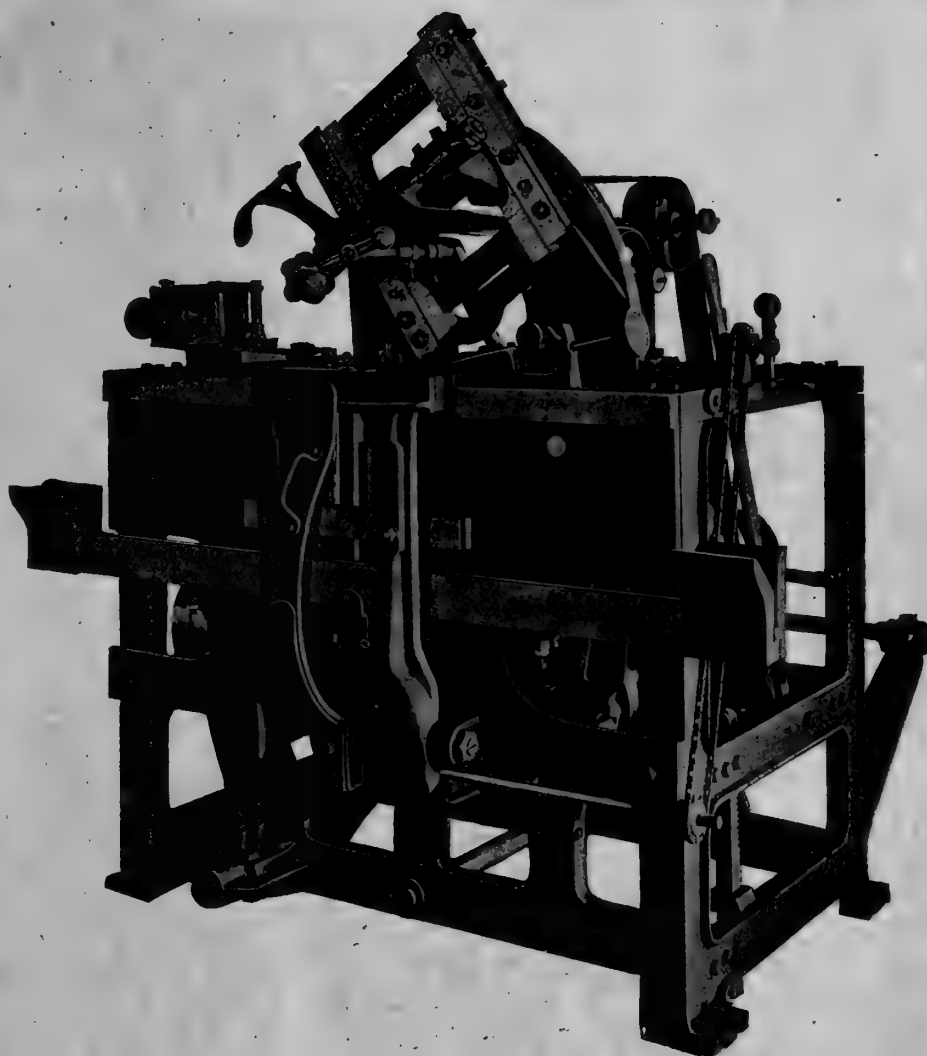
Stuart Machinery Co., Ltd., Winnipeg
Williams & Wilson Ltd., Montreal

Keep Your Filer Satisfied—

THE work your filer does is limited to a great extent by the equipment he uses.

See that you give him the kind that allows him to keep your saws in the best possible condition.

Smooth cutting, easy running saws mean smooth sawn lumber and good Filing Room Equipment is the secret of both.



COVEL SAW FILING EQUIPMENT

For Band and Circular Mills—Any Size

has the endorsement of the best, most up-to-date filers in this country.

Both in Canadian and American installations, where severe saw service is the general rule, COVEL Filing Room Equipment is giving results that are reflected directly in the well-sawn out-put of these mills. It is producing

better cuts of better lumber wherever used. *Your Filer needs that kind of equipment.*

We can supply COVEL Filing Room tools capable of handling circular saws up to 84" diameter, and bandsaws up to 20" wide, that will help him keep your saws in better shape at less cost than ever before.

Let us refer you to an installation near your mill where this is being done. Ask the Filer there what he thinks of COVEL Filing Room Equipment — Then write us for prices.

The Waterous Engine Works Co.

Limited

Brantford, Canada

M. E. Gilmour, Vancouver, B. C.

Branch—Winnipeg, Man.



"FROST KING" METAL

Our thirty five years experience in metal mixing enables us to place on the market a babbit that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

\$5,000,000.00

worth of mixed metal
sold annually.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:—

New York, N. Y.

London, Eng.

St. Louis, Mo.

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WEST TORONTO

MANUFACTURERS OF

Staved Columns
Veneered Doors
Newel Posts
Sashes - Flooring
Trim
Pine Doors and
Frames
Turned Newel Posts and
Balusters
Cypress Greenhouse
Material

BATTS LIMITED

MANUFACTURERS

WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
KNOWN
OUR
"EXTRA"



MONTREAL
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The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL



BOILERS

"INGLIS" boilers are the product of over 50 years' experience and study combined with the most modern equipment for boiler making.

"INGLIS" boilers are made in every type and all sizes.

Let us quote on your requirements.

The John Inglis Co., Ltd.

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The rapid cutting File is the economical File

Files Branded

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Port Hope, Ont.

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nought
Brand



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Brand

Electric Welded Steel Loading Chain

SIZE	LKS. FT.	PROOF TEST	BREAKING TEST	WT. 100 FT
7/32	16	2200 lb.	4500 lb.	60 lb.
1/4	14	2500 lb.	5000 lb.	80 lb.
9/32	13	3500 lb.	7000 lb.	90 lb.
5/16	12	4500 lb.	9000 lb.	110 lb.

Guaranteed to pull stiff before breaking

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Concentrate your buying and secure better service

Canada's Departmental House of Mechanical Goods provides an exceptional opportunity for economical buying.

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Our Transmission, Steam Goods, Woodworking Machinery and Machine Shop Supply Dept. will be particularly interesting to you. Anything from Dicks Balata Belt to Yale & Towne Hoists can be secured at our nearest warehouse.

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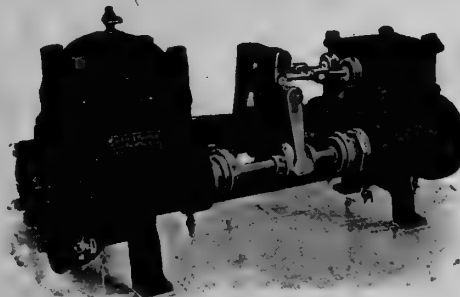
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Stocks carried by The A. R. Williams Machinery Co., Limited,
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Have You Tried Them?

They are pumps that live. Let us know your requirements.



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THE STRONGEST CHAIN IN THE WORLD

"Weldless
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Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

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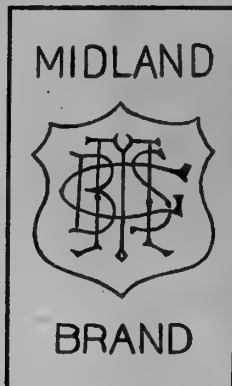
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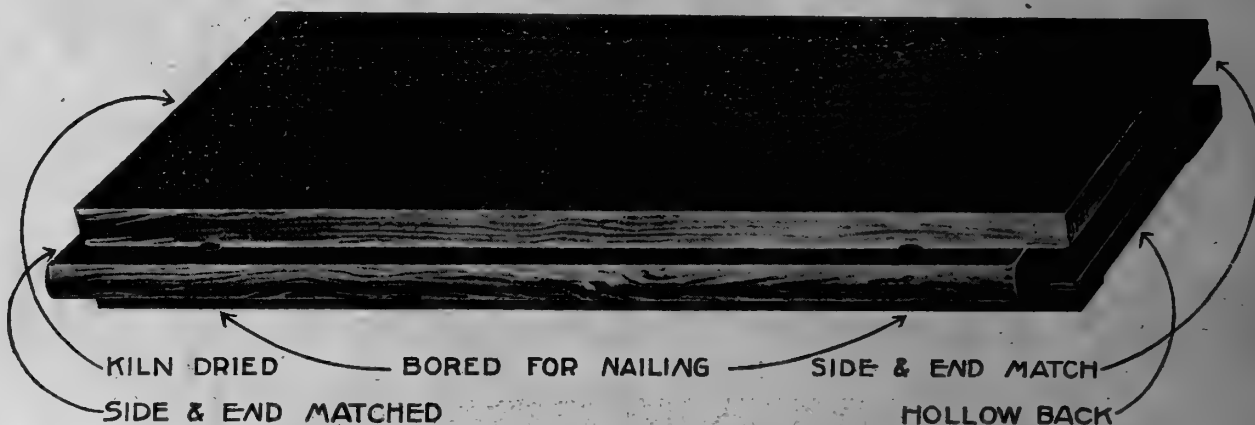
**Brand
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Every Piece

The stock we cut from is the finest Maple and Beech timber on the North American continent.

That means:—**Midland Brand Hardwood Flooring runs High in grade and is Strong in Good Lengths.**

The Contractor appreciates both these points.
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Kiln-Dried, Tongued and Grooved,

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Maple, Beech, Plain Oak, Quarter Cut Oak, Birch

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Manufacturers from the Tree to the Finished Product
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We have plenty of Red and White Pine

and are in position to take care of orders for almost anything in this line.

Prompt shipments can be made. We have a dry kiln and planing mill in connection and are in position to do milling on short notice.

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The Colonial Lumber Co., Limited.

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Our Double Band Mill, Huttig, Ark.

Why We Can Give "Value Received"

We Own one hundred thousand acres of the best virgin Southern Hardwood timber.

We Operate large band mills at Huttig, Ark., and Deering, Mo.

We Cut Forty Million feet of hardwoods annually and carry 15,000,000 feet in stock.

We Sell only stock cut on our own mills and so can **GUARANTEE** the quality of every shipment.

We Ship high grades that increase the size and percentage of your cuttings, reduce factory costs and shrink the waste pile. Therefore:

We Can save you money on every shipment of oak, ash, gum, elm, cypress, tupelo, hickory, cottonwood, sycamore, soft maple and dimension.

Let us prove this on your next order.

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CHICAGO

The
M. Brennen & Sons Mfg. Co.
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Matching, Dressing and Re-sawing

done in Transit at Lowest Prices

We are Equipped to Dress and Bore
Heavy Georgia Pine Timbers

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Everything in Timber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

Write, Wire or 'Phone for Prices

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Business for you because you want good Lumber.

Business for us because we have some mighty good lumber to sell you in

Hemlock

Pine and Hardwoods

Special bills will be shipped promptly from our mill which is running day and night.

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**13 FT. STOCK
GOOD GRADE AND
MANUFACTURE**

SPRUCE

**1x9, 1 1/4 x9 and 2x9.
SEE STOCK LIST
BELOW**

For Quick Shipment from Stock in Yard. Rail or Water Deliveries.

Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Merchantable	Clear & No. 1
1x4	1x9	1 1/4 x7	2x4	2x9	3x7	1x4
1x5	1x10	1 1/4 x8	2x5	2x10	3x8	1x6
1x6	1 1/4 x4	1 1/4 x9	2x6	3x4	3x9	1x7
1x7	1 1/4 x5	1 1/4 x10	2x7	3x5	3x10	1x8
1x8	1 1/4 x6	2x3	2x8	3x6	3x11	1x9
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DRY SPRUCE, 10 to 13 feet LENGTHS (mostly 13 feet).

We also solicit Special Sawing Bills of 13 foot Spruce for future delivery.

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WHITE PINE

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"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow
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Cedar Telegraph and Electric Railway Poles 20 to 80 ft.

Write for prices

Timber for R. R. Construction and
Commercial Purposes, a Specialty.

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Manufacturers of **YELLOW PINE LUMBER**

Mills:—

Selma, La.
Jena, La.
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Long Leaf Timbers,
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Railroad Material

Send your inquiries and orders to:—

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Cedar Shingles

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BARTRAM BROTHERS

Limited

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The Best There is
in

Red and White

PINE

Wm. H. Bromley

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Quincy Adams Lumber Co., Limited

MANUFACTURERS AND WHOLESALERS OF

White Pine, Birch, Spruce and Hemlock

Mills on G. T. Ry.—LONGFORD
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Dry Factory White Pine—All thicknesses.

Nice Line 1 x 4 and up—6/11 Moulding White Pine.

I WANT YOUR ORDERS

and solicit your inquiries for

Pine, Spruce, Hemlock, Hardwoods, Lath

Deal with me and you will be satisfied every time.

C. A. SPENCER

*Wholesale Dealer in Rough and
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Eastern Townships Bank Building, MONTREAL, Quebec

Winter mill now sawing. Can cut
bills in Hemlock, Pine or Spruce.
Spiles and ties for quick shipment.
Planing mill in connection with saw
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Fesserton Timber Company, Limited
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1912 Cut

MUST MOVE

1 x 8	10/16 B and Better Pine
1 x 10	10/16 B and Better Pine
1 x 12	10/16 B and Better Pine
1 x 13 and up,	10/16 B and Better Pine

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Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.
Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

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Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**

The J. B. Snowball Co.

Limited

Chatham, New Brunswick, Canada

FOR SALE

20	M.	3 x 4 1/2	Spruce	10 ft., and up
50	M.	2 x 5	"	" "
20	M.	2 x 3	"	" "
20	M.	2 1/2 x 6	"	" "
30	M.	2 1/2 x 7	"	" "
140	M.	3 x 4 and 5	"	" "
300	M.	3 x 6	"	" "

All in good shipping condition.

Now contracting for delivery during the
coming Summer for 1 x 4, 5 and 6
Spruce, also 2" Spruce.

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We invite correspondence re
"Dalhousie" Brand
N. B. Cedar Shingles *of all grades*
Special Prices for shipment to
All Ontario Points

Dalhousie Lumber Co., Limited
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Agents for Ontario **R. Laidlaw Lumber Co., Limited**
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Edward Partington Pulp and Paper Co., Limited

Head Office, St. John, N.B.

Mills: St. John, N.B. Blackville, N.B. Marysville, N.B.

Manufacturers of

Bleached Sulphite Pulp

Spruce, Pine and Hemlock Lumber, Laths

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a classified advertisement in the *Canada Lumberman and Woodworker* will find one for you.

If You are a Capable Man

no matter how small or how big your present position may be, an advertisement in *this paper* will put you in touch with every existing possibility.

The rates are most reasonable, write us.

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SPRUCE**

13 Foot and 16 Foot

Lath and
White Cedar Shingles

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149 Broadway, New York City

JOHN P. NEWMAN

Saw Mill and Novelty Works. All
kinds of Hard and Softwood Lumber.
Dimension Stock in Beech, Maple and
Birch. Mattress and Cot Frames, Etc.
*Send me your requirements, I can furnish
you stock that will please.*

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LUMBER AND TIMBER

White Pine, Norway Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and
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Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

Hardwood Flooring

The Celebrated Diamond Brand

End Matched, Bored,
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Manufactured by
SIEMON BROS., LTD.

For prices write

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Portable
CLOCKS**

We are the only MANUFACTURERS
in America

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We are in the market for the
output of mills manufacturing

**White and Red Pine
Spruce, Jack Pine**

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also the output of mills manu-
facturing any or all kinds of
Canadian Hardwoods — Write
us at once. Will pay the high-
est cash prices and ship stocks
out promptly. We are buying
now our 1914 stocks. Write
us giving list of lumber you
have or amount you expect to
have this season.

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Manufacturers and Strictly Wholesale
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of Lumber and Timber in Can-
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**The Canada Wood
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Manufacturers:

Lumber, Hardwood Flooring,
Handles, Poles, Bed Frame
Stock, Cheese Box Hoops,
Heading, Baskets, Etc.

Write, Telegraph or Telephone
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Saddle Tank Locomotives
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Steel Rails
Flat Cars

All Secondhand

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SPECIALTIES

Sawed Hemlock
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White Pine Lath
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For eleven years my business has been growing. Since 1910 I have made detailed timber estimates and maps of over 700,000 acres of land. In 1913 on one contract alone I planted 200,000 trees. Experience and system aid correctness and efficiency. Let me serve you.

Timber Estimates
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My reports show where the waste is, and how it may be eliminated.

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Southern Hardwoods

Cypress, Kiln Dried North
Carolina Pine

Send Us Your Inquiries
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But this does not apply to timber unless you are capable to determine

how much you see.



We have perfected our cruising methods by years of study and experience.

We invite Correspondence.

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Consulting Forest Engineers
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New York, 622 Tremont Bldg.
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Competent employees for saw mills and woodworking plants are scarce. The best of them read this paper regularly. To get in touch with good men send a "Want Ad" to the

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"Well Bought is Half Sold"

Special Hardwood Offer

125,000 ft. 4/4" No. 1 Common & Better Birch
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Dry and Well Manufactured

Good Grades Prompt Shipments

Order early and avoid delay by Car shortage

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SPECIALTY: Dressing of wood
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**Dry Norway
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All Sizes and Grades

Everything in Lumber

Wholesale and Retail

Write or wire us for your requirements

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**California White Pine
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Best Stock for Factory and Pattern Lumber

Ask **LOUIS WUICHET**

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In order to meet the keen competition in the lumber market, you insist on machinery of the highest efficiency to reduce your mill expenses.

Why not pay a little attention to the expenses of your drive.

**A Shaw Motor-Headworks
will save you**

Time, Timber, Men and Money

For further particulars write

RUSSEL BROTHERS

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For low prices and prompt shipment of
**Yellow Pine Timbers
Short Leaf Finish
Chestnut --- Oak --- Ash
Cypress
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Manufacturers of
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HEMLOCK BILLSTUFF a Specialty of which we have the Best Assortment on Georgian Bay.

Don't wait to write. Phone us your requirements.

All stock sized or matched if required.

Our Yards are Unequalled for Drying Lumber

TORONTO

Highest Grade

Extra Clear XXX

B. C. Red Cedar Shingles

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If you want quick delivery
write, wire or telephone

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Spruce { 1 x 4-5-6-8 Dressed or Rough
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Red Pine .1 x 4-5-6, Dressed or Rough

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Manufacturers of

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Mills at Victoria Harbor, Ont.

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will reach your present and prospective customers oftener than your travellers.

☞ Keep your name before lumber buyers by constant advertising.

☞ Familiarity breeds business.

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Toronto, Ontario

We offer the following

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2 x 4," 10, 12, 14 and 16' each length piled separately
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2 x 8," 10, 12, 14 and 16' " " " "
2 x 10," 10, 12, 14 and 16' " " " "

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For Immediate Shipment—

4000 HEMLOCK TIES

3000 CEDAR TIES

100 M 10x10 HEMLOCK TIMBER

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Timber and Lumber Merchants

**Shippers of All Kinds
of Lumber and Timber**

Head Office, Quebec, Que.

Branch:

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We have started "Double Tower"

OUR New Mill commenced operating on January 5th, and is now running steadily. We started double tower, that is running night and day, on January 15th.

We are open to contract for our Hardwoods and Softwoods, and would be pleased to receive any enquiries for special bills.

Fassett Lumber Company, Limited
Fassett, Que.

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

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SOLICITED

Mills at:

St. Pacome, Que., Canada

**On I. C. Ry. 75 Miles East of
Quebec City**



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Large stock of 1" 1/4", 1 1/2" and 2" WHITE PINE, Bone dry.

SPECIAL LOW PRICES

on 1 1/4", 1 1/2", and 2" Shipping cull sidings and cut ups.

Offices at
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Mills at
Mont Laurier, P. Q.

Mack Axes

The World's Best

HERE are six styles of axes that are made from special crucible steel bit and capable of retaining an edge longer than any other axes made.

**FELLER, MAXAX
CHIPPER
BEAVER**

"66"

OTTOWA CHIEF

Our motto of "Quality and Workmanship" is the foundation of our success and every axe we make can be depended upon to make good our motto.

Get our Prices and Particulars.

The Mack Axe Works
Beaver Falls, Pa., U. S. A.

"CANADIAN MADE"

Fourdrinier Wires and Cylinder Covers

Manufactured in Ottawa by the

Capital Wire Cloth & Mfg. Co.

Dandy Rolls and Cylinder Moulds Limited
Repaired and Recovered

Machinery and Timber For Sale

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 8-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for, right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 16-ft. Slash table. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
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| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |

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There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and rails and turn-tables, particulars of which may be had on application.

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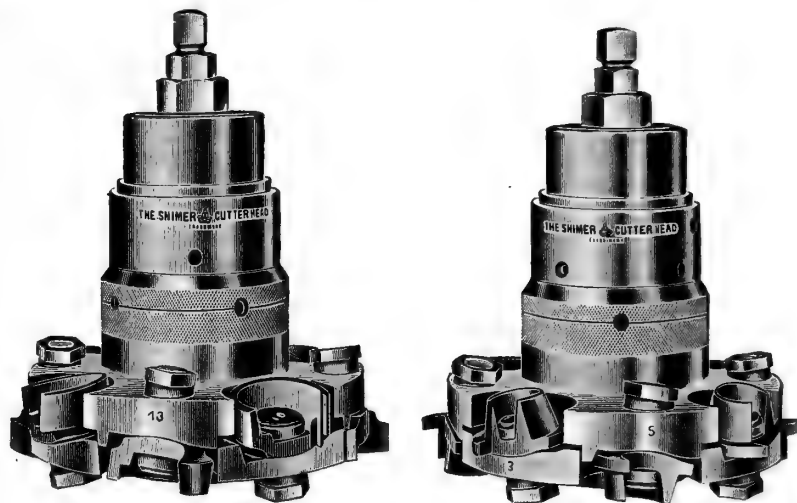
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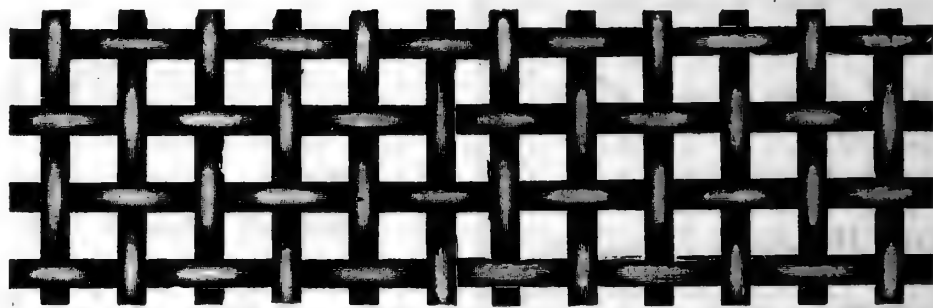
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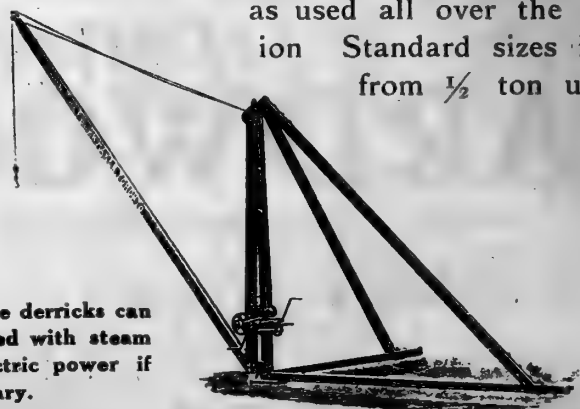


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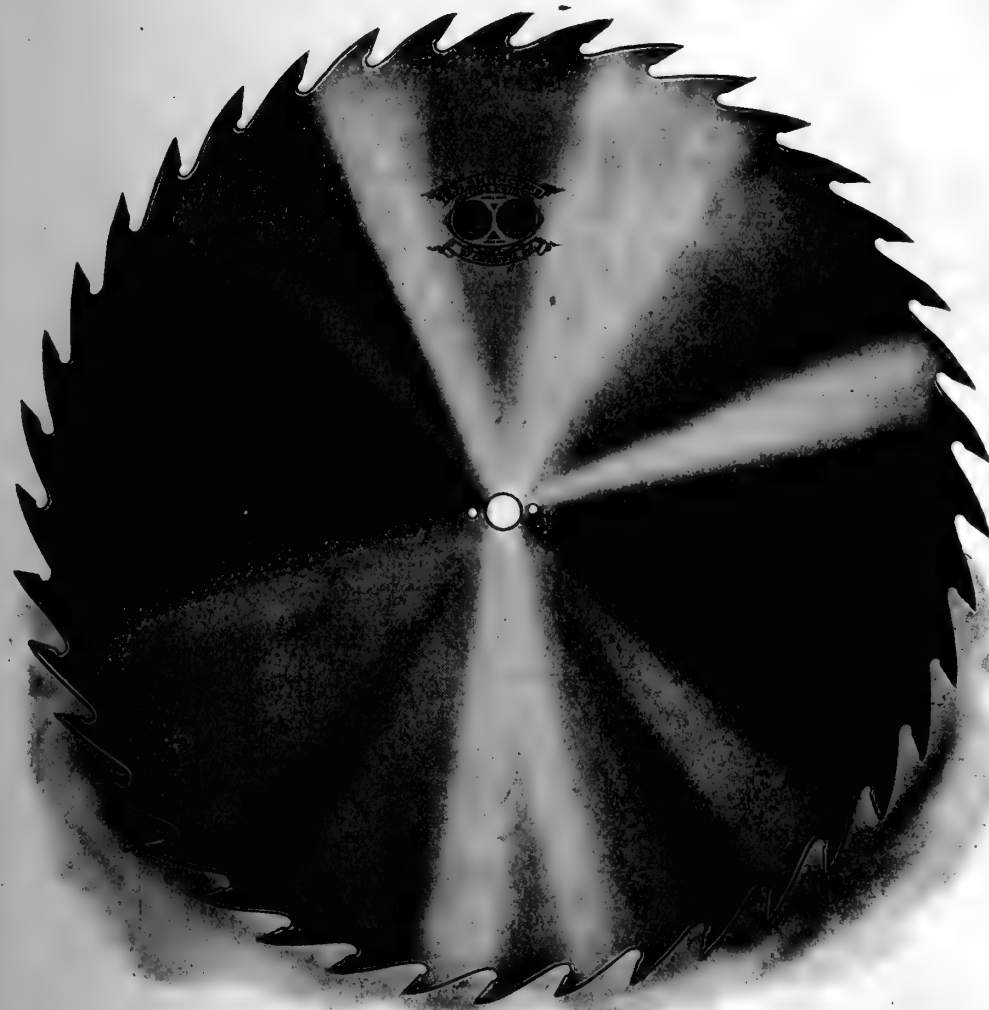
These machines will accommodate material up to 5' in diameter and 48' long. They have superceded all other methods of producing neckyokes, singletrees, whiffletrees and doubletrees in all their shapes and sizes, always performing the work at an immense saving over any other method.

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We make a specialty of these lines

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Write to us for quotations.

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By our Patent Process that uncertainty is entirely avoided.

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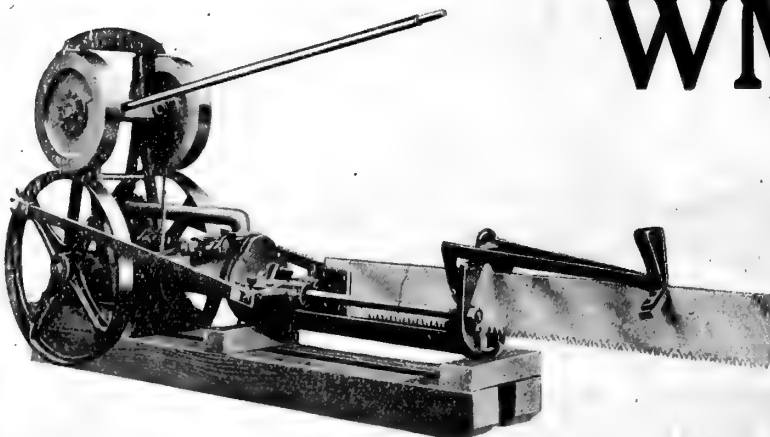
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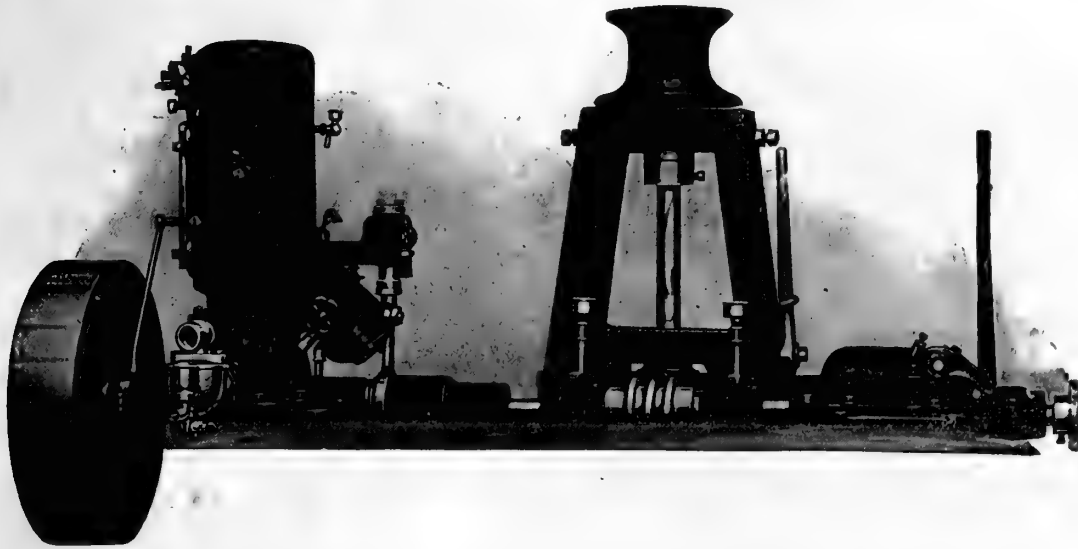


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Write for Drag Saw Catalog fully describing this as well as other types.



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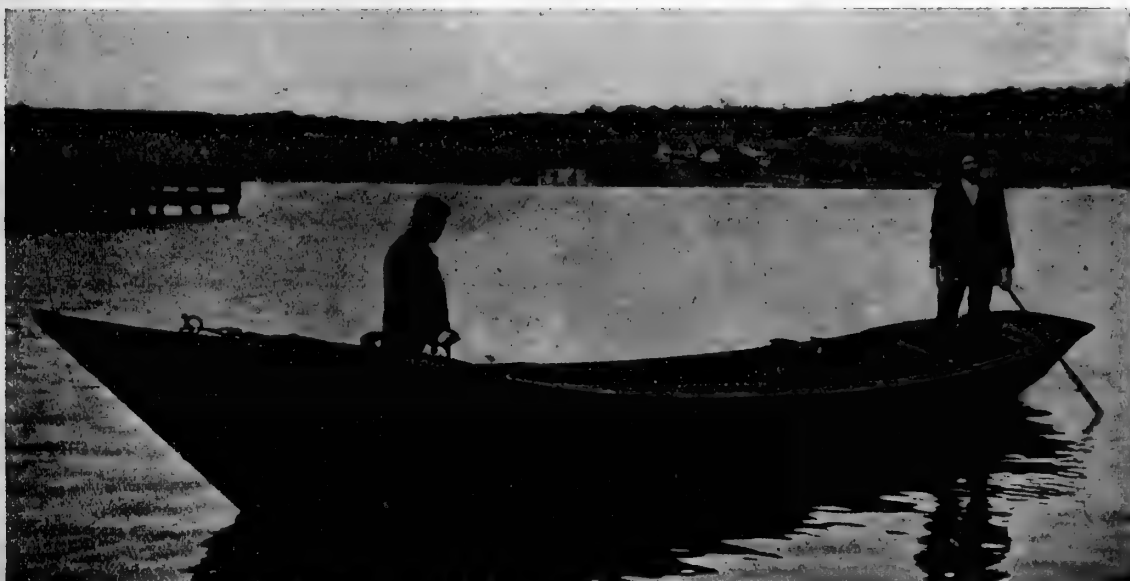
The planking is Louisiana Red Cypress.

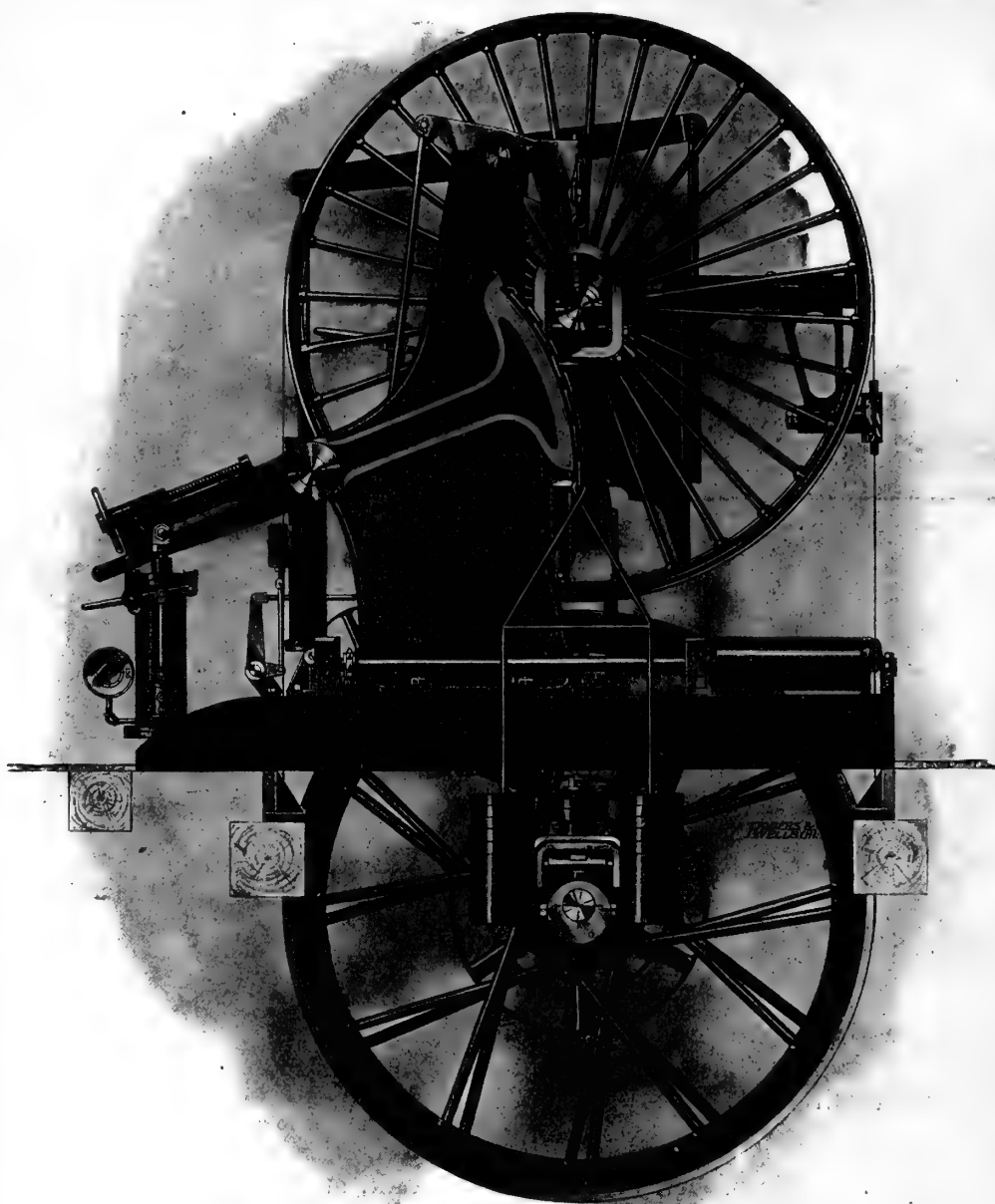
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No form of tension yet devised is as easy on the saws as the steam tension—several of the users of this mill have run through an entire season without cracking a single saw.

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When you are tuning up your mill this winter for next season's operations, remember that we can serve you promptly whatever your requirements may be.

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

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Vol. 34

Toronto, February 15, 1914

No. 4

The C. L. A.'s Successful Annual

The most important meeting that the Canadian Lumbermen's Association has ever held was that which took place at Ottawa on February 3rd. There have been many criticisms directed against the Association in the past, the chief of which was to the effect that it was developing into an affair consisting solely of an annual meeting and a banquet, and that those who benefitted were the active members located at Ottawa, and not those who were located outside of that city. These were serious criticisms and could not be overlooked. The question was brought up, with his customary straight-forwardness by Gordon C. Edwards and was discussed by many of the members at the meeting. Those who heard the discussion were convinced unquestionably that these criticisms were not justified; that they were in fact the criticisms of people who had themselves to thank for not receiving greater benefits from the association. If the association was not active enough, or working along lines to suit some of its members, or even some outsiders, these men should themselves have got actively to work to remedy matters, instead of standing aloof and criticizing. This view was taken by all who spoke on the subject and they were so unanimous in their appreciation of the association and its work that the matter dropped at that point. Then the members went on to discuss their regular business affairs and it soon became apparent that, not a single manufacturer or wholesaler of lumber in Canada could afford to remain outside of the Canadian Lumbermen's Association, so long as he could scrape together the very moderate membership fee.

For several years the association has been passing through its formative stages. The struggle has been an up-hill one involving not only the regular organization work connected with any form of business activity in its early days, but also involving a fight against prejudice and lukewarmness which might have depressed and discouraged less determined men than those who have been responsible for the development of the association up to date.

The Canadian Lumbermen's Association has represented the lumbering industry during the few years of its existence in a very effective manner. It has fought the battles of the lumbering industry before the Board of Railway Commissioners and has met with considerable success in this direction. It has succeeded in bringing about a better relationship between the lumbermen and the railway interests, which may some day result in the removal of many of the annoying difficulties connected with lumber shipments. The association has brought together a lot of lumbermen who formerly knew little of one another, and has shown them how closely their mutual interests are connected. During the year which has just passed, the Canadian Lumbermen's Association has entered the field of actual business activities in a manner which promises to make it not only valuable to the lumberman, but indispensable. By taking up the creation of a credit rating service, the association has undertaken a work which promises to do more towards increasing its membership and spreading its influence than anything else which it has yet undertaken. In the face of considerable opposition and indifference this credit rating service has been worked up successfully. The value of such a system cannot be over-estimated. Lumbermen already pay a large amount annually, in many cases, for the lists of general credit rating agencies. If a list is prepared by lumbermen and kept up-to-date by men who are closely in touch with the lumbering industry, there is no question that the information which it furnishes will be many times more accurate and valuable than any other which is at present available. The manner in which this service has already been received and developed leads to a belief that, with the encouragement which it deserves, it will be developed into a great factor in the lumbering industry. That the Canadian Lumbermen's Association will establish itself firmly among lumbermen as a result of this service seems certain.

Another step which will probably be taken by the association this year, as a result of the discussions at the last meeting, will be the formation of a branch for the gathering of statistics of production, consumption, etc. It would be possible for the association to gather information of this nature and at the same time to secure information as to the probable operations of its members during approaching seasons. By such means a useful idea can be obtained, well in advance, of conditions which are likely to prevail in connection with trade.

In addition to these practical features, the recent annual meeting was as interesting and largely attended as any of its fore-runners. The members present took an active part in all the proceedings and made the discussions thoroughly practical and valuable. Many members brought their wives and families with them and the presence of the ladies at the banquet was a welcome innovation in the proceedings.

Taking into consideration the features above outlined, together with the enthusiasm of the members present, one is amply justified in asserting that this year's annual meeting marked a distinct step in the advance of the association towards the ideals which its founders had in view.

Credit Considerations of Great Importance

Greater attention is being given at present to the matter of credits in connection with the lumber business in Canada than has probably been given at any previous time. When one considers the trade conditions prevailing to-day and those which have prevailed during the last year, it is not surprising that this should be the case. For a period of several years prior to the summer of 1913, the lumber trade was unusually prosperous in nearly every part of Canada, and credit was extended much beyond the limits of caution. Only the strong position of the country from an industrial point of view saved it from more serious results arising out of this credit extension during the last few months. Now that the corner has been turned, those who were worried about their credits—and this includes practically everybody in business to-day—have commenced to consider the best means of preventing the recurrence of a similar trouble.

At the bottom of the whole situation lies a factor over which we have not so great control in Canada as they have in older countries.

Our business to-day is done very largely upon credit, and when trade becomes depressed it is always a difficult matter to draw in the credit lines. For the same reason it is a matter of greater difficulty in Canada, than it is in older countries, to prevent the extension of credit beyond safe lines. The country must be built up and developed and the only way to do it is to make use of the capital from other countries which is available for such purposes. From the large manufacturing and constructing companies, therefore, down to the smallest concerns engaged in supplying building material, borrowed money is circulating freely in times of active business, and in times of depression the circulation of this money is interfered with and those who are dependent upon it for the life of their business find themselves in trouble.

The experiences of the past all point strongly to the wisdom of holding, in front of every kind of business, particularly such businesses as the manufacturing, buying and selling of lumber, a trade ideal carried on as closely as possible upon cash basis. This is almost impossible in connection with the lumber manufacturing business in which it some times takes a matter of several years to turn the raw material over into the hands of the consumer in the form of a manufactured article. But, in connection with the wholesale and retail lumber trades there is room for a much closer approximation to the cash business than has been obtained in the past. The nearer one comes to the ultimate consumer of lumber, the more desirable and feasible does this ideal become. Wholesalers really are obliged to act as bankers for both manufacturers and retailers in many cases, but retailers are in a better position. In the past they have too frequently considered themselves in the light of bankers for their consumers. Many retailers to-day, are talking about the wisdom of a cash business, who formerly would have considered such a proposal impossible. It is a sign of the times, which may only be a temporary result of the recent depression, but we believe that it is more than this; that it is an indication of a gradual change which is coming over the face of the retail lumber trade. Retailers who used to do business almost entirely upon a credit basis, feeling that they were obliged to do so in order to keep that portion of their trade which was profitable, commenced a few months, or years ago, to educate their customers to paying cash. The remarkable thing about it is how much easier they have found the change than they had anticipated, and how much more profitable it has been than was expected.

This matter has been discussed with the Canada Lumberman by nearly every retailer whom it has recently visited, or with whom it has corresponded and all of them have been of one opinion, that they should have tried this plan long ago. There may be localities in which

the change would be a much more difficult matter than in others, but it is safe to say that the retailer has a right to the interest upon the money which a customer owes him and that the interest should be the current bank rate. If this fact were given its proper importance by dealers and customers, the whole credit business would solve itself. In charging the bank rate of interest after the due date of the bill, retailers are only doing what is businesslike and fair. Moreover, they are doing a service to trade in general, by keeping it within its proper channels and by doing their share in solving the problem of maintaining the circulation of money.

With the wholesaler the problem is more in the nature of watching carefully the class of firms and dealers to whom credit is given. Any man can go out upon the road and take orders for lumber, but to take orders for which money will be paid without unreasonable delay, is quite another matter. One hears many discussions about the mistakes made by different firms in granting credit where it is not deserved. There is a certain class of businessmen in every country to whom credit should not be extended. Most of such men are known individually to those wholesalers who are successful, and any business done with them, by such firms, is on a cash business. Other wholesalers, however, will send out men upon the road and accept orders taken from such firms, without any hesitation; shipping to them, stock for which there is grave doubt about their ever receiving anything in payment, except perhaps a certain amount upon the dollar when an assignment has been made.

The move which the Canadian Lumbermen's Association has recently taken in the direction of establishing a credit rating service, which will make information available upon the standing of different firms, gives promise of splendid results. It has been worked out with great success in other countries. It has done no harm to any one, but a great deal of good to nearly all. It obliges those who are inclined to purchase too rapidly, to go on a more conservative basis. It warns those who are too free with their credit against most of the danger spots. It has a regulating and controlling influence which cannot be over-estimated. The growth of such a scheme will do more towards placing trade upon a safe basis than anything else. The formation of a general credit service of this sort, will also direct the attention of individuals more definitely towards the importance of systematizing their own credit business, and will, in this way, encourage the development, in individual offices, of what ought to be effective credit rating services for individual use, based upon the results of business experience.

Yellow Pine in Trouble at Home

Much of the criticism which has recently been directed against the use of yellow pine in Canada has been focussed upon the lack of durability in short leaf timbers. Some of the criticism has carried this same complaint against the long leaf variety, but the latter finds many defenders who deny the charge. Dry rot in short and loblolly pine has lately come strongly into the limelight, both in the United States and Canada and the charge is openly made that these timbers will not withstand the attack of this fungus. Recently the matter took on an altogether different appearance, however, in the Eastern States. To understand the latest development one must know that the New England factory mutual insurance companies developed, many years ago, what is known as the slow burning frame mill construction. This has done much to enable wood to hold its place in competition with steel and concrete. A new expert in the employ of the same insurance companies has now come to the front with a statement which has set the long leaf yellow pine trade by the ears. The sum of his criticisms is that hard pine of the old durable variety is now out of the market and that sufficient to build a factory cannot be obtained in the sizes required, at a price competitive with other materials. He concludes that the resin percentage is the index of durability, and, examining timbers for which (according to his statement) \$59 a thousand feet was recently paid, he finds them deficient in certain parts. Reducing them to such sizes as will show 5 per cent. of resin through-

out, he obtains a cost price of \$115 a thousand feet, and offers some quotations that appear to indicate that this is a reasonable price conclusion.

All this would be great news for the manufacturers of hemlock, spruce and red pine in Canada who have found yellow pine such a serious competitor, but it would be unwise to put too much faith in this criticism. Without wishing to take one side or the other in this dispute, but simply to present the case as it appears to an American Trade Journal, so as to acquaint our readers with the details of this interesting development, we present the following quotations from the latest issue of the American Lumberman:

"The facts of the matter are that as good long leaf timbers as those used years ago, and whose durability is admitted, can be laid down in any desired quantity in the average New England town, of the prime quality requiring two-thirds heart to show, at \$40 to \$45 a thousand feet, in sizes up to 20 x 20, 24 feet long, or larger than the average requirement; and 12 x 12 about \$6 less, intermediate sizes in proportion. The engineers and architects have not been obtaining timbers of this kind because they have not insisted upon them. Short leaf and loblolly timbers in large quantity find their natural market in New England, and have ample strength and durability factors for many purposes. But factory engineers need not accept them in place of longleaf where longleaf is needed, in textile and other factories

where temperatures of 80 degrees, and a humidity approaching saturation, are constantly maintained—ideal cultural conditions for the dry rot fungus.

"At the same time it is very unfortunate for the manufacturers of such structural timbers that they should have gone into a use for which they are not fitted. Laxity of purchasing inspection may react in such a way that the manufacturer of the durable kind of timbers may find it necessary hereafter to brand his product, and stand back of the brand, but even this will not cure all the harm that has been done. The substitute game has gotten another boost; and if there are any lumber manufacturers who have crowded in material for this use which they knew did not conform to the specification and would not endure the severe test of durability involved they were the ones who did the boosting. The fact that they were allowed to do this only because the purchaser, through carelessness or inexperience, left the door open to them through lax inspection is hardly a sufficient excuse.

"Perhaps, some day, architects and engineers will be able to protect their clients, and therefore the lumbermen, against such unfortunate happenings; but this somewhat remarkable report, does not point strongly in that direction. It is quite likely that the resin in wood has something to do with its resistance to some forms at least of fungus; but anyone who has ever studied a cross-section of longleaf yellow pine will recall the small and isolated resin ducts, which may amount to 5 per cent. or more in area but are distinctly separate from the other 95 per cent. of open-celled structure. If the antiseptic action of resin is due chiefly to its waterproofing quality it is difficult to see how the resin segregated in these ducts can protect the rest of the wood structure in which only traces of it may be found."

All the above points to the fact that Canadians have not been the only ones to suffer by reason of the use of a very poor grade of short-leaf pine, in competition with timbers of a much greater intrinsic merit.

A Factor in Decline of the Waney Pine Trade

Many reasons have been given for the decrease in the export trade of Canada with Great Britain, in waney pine, which has been so noticeable of late years. Most of the reasons are fairly well understood by those who are interested, being chiefly the rising price of Canadian white pine on account of its increasing scarcity, the growing demand for Canadian white pine in the United States, the competition of Russian and Swedish woods and also the competition of yellow pine from the United States. Another cause has apparently grown out of the combination of causes already mentioned. Consumers in the Old Country have been gradually educated into a belief that Canadian waney pine is practically unobtainable and have given up asking for it. The Timber Trades Journal of London, England, discussing this situation in a recent issue says:—

The advance that has taken place in the price of the high qualities of Quebec waney pine during recent years has had the effect of putting it very much out of the market for general purposes and for house-building. Russian and Swedish woods have been substituted, while the shipbuilders have taken pitch pine largely for their work. This condition has gone on for some years, and the impression now prevails that waney pine is practically unobtainable. This idea is altogether

erroneous, as although the growing timber may be further removed from points of transit, unquestionably there is still a very considerable supply to be drawn from. In addition to this, there is, we believe, at the present time a larger stock of this wood in Britain, particularly on the Clyde, than has been the case for some years. The quality and specification are undoubtedly better than they were, and the timber can be had at a less price than it realised some years ago. This also applies to the timber "on the other side" which will be shipped to this market. There is no doubt about the superiority of Quebec waney pine over pitch pine for both appearance and durability in the case of decks for high-class river, channel and ocean-going steamers. We venture to think that only under the mistaken belief that Canadian pine could not be got, have the designers, owners, or builders of a steamer like the largest and finest Cunard liner "Aquitania" been influenced to have the promenade deck especially laid with pitch pine instead of Quebec pine. Where effect is desired in keeping with the other fittings of fine vessels it can be had at comparatively little extra cost by using the Quebec pine in place of pitch pine. We point this out so that designers and builders of passenger vessels may be guided in the future, and in this connection a field for the exercise of its characteristic enterprise here presents itself to the trade."

Editorial Short Lengths for Busy Readers

Many new enterprises, both in mills and logging camps, were announced in British Columbia early in 1913, contingent on the good times, but most of these have been postponed. It is very probable they will be proceeded with in the future. Two or three large propositions are in view. The Empire Lumber Company, of New York, is going ahead with its mill at Crofton, east coast of Vancouver Island; it has extensive limits at Cowichan Lake, fourteen miles inland. Thomas White and W. H. White, of Boyne City, Michigan, and W. O. King, of Chicago, who own limits at the head of Vancouver Island, propose to go into saw milling on a large scale. In the northern part of the province, a company of Montreal capitalists, including Hon. W. C. Edwards, Alexander MacLaren, George B. Pike and E. J. Chamberlain, the latter manager of the Grand Trunk Pacific, will erect a mill at Dowe creek, on the upper Fraser, when conditions are favorable.

Figures for the year, although not complete, show that log production of British Columbia for 1913 was about the same as in 1912. January 1 a year ago a change was made in the districts. Prior to that all the Coast was in one district. Now the district that reports to the timber inspector in Vancouver is less in extent, other reports going to Victoria. In the Vancouver district there was an increase of about 16,000,000 feet in the cut of timber last year. With a reduction elsewhere this amount will about offset the difference, so that for the province as a whole the cut is about the same as in the year pre-

vious. There is this difference, however. A year ago the log surplus amounted to about 200,000,000 feet. This year it is about 3,000,000 feet. On the other hand stocks in the yards are smaller than a year ago. Eighty per cent. of the logging camps are reported by the timber inspector to be shut down, but it is expected they will be in operation again the latter part of January or the first part of February. The same applies to the mills on the coast. Although normal conditions will not resume suddenly it is expected that within six months there will be a good general business.

An important and interesting judgment has recently been given by the Judicial Committee of the Privy Council in the case of David McLaren vs. the Attorney-General of Quebec. David McLaren is the owner of land on both sides of the Gatineau river at a point where there is a 40 ft. fall. In 1899 the provincial government granted water power rights at that point to Wm. and Edwin Hanson. Mr. McLaren brought suit to have this grant set aside, maintaining that, as riparian proprietor, he had rights to the bed of the river. The Attorney-General intervened to uphold the grant. In 1909 Mr. McLaren secured judgment in his favor in the Supreme court at Hull. An appeal was brought by the Attorney-General to the court of Kings Bench and the Superior Court judgment was reversed. Mr. McLaren took the case then to the Supreme Court, where the judges divided evenly, thus leaving the judgment of the Court of Kings Bench in effect. Mr. McLaren took the case on to the Privy Council which has now decided in his favor.

Sixth Annual of C.L.A. a Great Success

Most Important Meeting in History of the Association—Credit Rating Service to be Developed—Senator George Gordon the New President

The sixth annual meeting of the Canadian Lumbermen's Association was held at Ottawa on February 3rd and was easily the most successful and important of all the annual meetings which the Association has held. There was a good attendance. After the routine business in connection with the opening of the meeting had been disposed of, the president, Mr. Alexander MacLaurin, delivered his address. After referring to the chief events of the year 1913, which had influenced financial conditions, the president said that while business at the present time was on a very restricted scale, perhaps they had been galloping along at too fast a pace and using up their natural resources in an extravagant manner. He could see nothing in the future to create discouragement. Money for legitimate use would, he felt, be comparatively cheap. He saw no necessity for slaughtering prices. Prudence, economy and co-operation were the lines which he recommended for adoption. The Canadian Lumbermen's Association was undoubtedly of great value to the trade in Canada. He urged upon the members to co-operate more extensively with the secretary and to make more frequent use of the Association and its services.

The recent removal of the duty upon lumber entering the United States had not resulted in the "swamping" of United States markets by Canadian lumber, as had been so generally predicted. Whether or not the ultimate consumer in the United States got the advantage of this abolition of duty was of no concern to Canadians, where the business was on the basis of a price f.o.b. at the point of shipment.

Speaking of Southern pine and its use in Canada, Mr. MacLaurin quoted from the remarks of president Corwin at the semi-annual meeting of the N. C. Pine Association, held recently at Charlestown, S.C. Making comparisons, running over a 20-year period, the following results were shown. In 1893 the timber yielded 55 per cent. of firsts and seconds and 45 per cent. in lower grades, and the average price realized was \$13.25 per M. feet. The cost of operating in '93 was considerably less than the present time. The old growth timber was then conveniently located for both rail and water transportation. To-day the lumber was further removed, sappy and inferior in grade. It is in small lots scattered here and there and largely of second growth. The cost of rail-roading has increased since 1893, and the increase is all the way from \$3.00 to \$6.00 per M., labor is more than double and the grades of No. 1 and 2 have dropped from 55 per cent. in 1893 to 18.6 per cent. in 1912 with 81.4 per cent. of grades below Nos. 1 and 2, as compared with 45 per cent. in 1893. The price realized in 1912, taking all these things into consideration is \$4.42 per M. less than in 1893, and Mr. Corwin was of the opinion that the 1913 prices would show a still further decline of from \$2.00 to \$2.50 per M. How long our friends to the South would continue quoting ruinous prices for southern pine in order to get business, is for them to say.

Undoubtedly, in many instances, this southern pine was used for purposes for which it was quite unfit. Owing to its inflammability, other woods of Canadian growth would be more desirable. The lumbermen had much to do to educate people in the use of the right kind of lumber. Their efforts should be concentrated upon the various

associations of architects, with a view to persuading them to specify Canadian grown lumber wherever possible. A great deal of southern pine was being used in the construction of cars, not only for sills, but for lining of box cars, etc. Canadian spruce or pine would be preferable for the last-named purpose, from a fire point of view.

Mr. MacLaurin suggested that the Association should organize a department of statistics. If they could get all lumber mills to report to the secretary what their actual cut had been during the sawing season and what their probable cut in the woods would be, the information would be of great value.

Speaking of the Panama Canal, Mr. MacLaurin said that it would not create a demand for a single foot of lumber that did not already exist. It might result in disturbing the various sources of supply and demand, but in his opinion conditions would right themselves and natural sources would find their natural markets. He believed also that the 10 per cent. additional duty on all articles entering the United States in foreign vessels would only amount to an extra burden to the American consumer, and would not be of any practical benefit.

The secretary's report dealt in an interesting manner with a number of the important developments which have taken place recently in the lumber business. The following interesting comparison was made of the trade in lumber in Canada and in the United States.

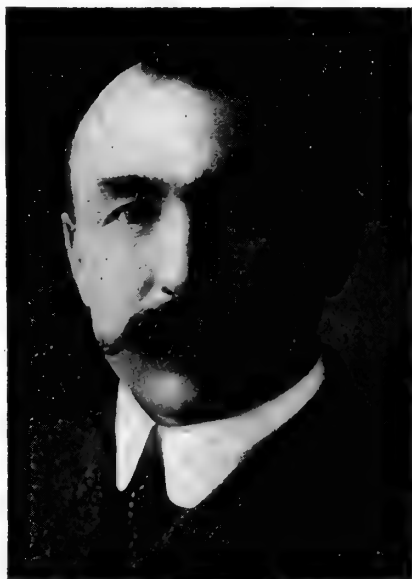
The total estimated lumber production of the United States for the calendar year 1912 was practically 44,500,000,000 ft. b.m. The reported Canadian production for 1912 was 4,389,723,000 ft. practically 10 per cent. of the cut of the United States.

Attention was called to the Australian trade in timber, lumber, etc. That country imported during 1912 453,778,175 sup. ft. of a value of \$13,390,187. Of this amount the United States sold them in quantity 57.8 per cent., while Canada only furnished 4.2 per cent. A comparison of the average prices obtained is also to the disadvantage of Canada, viz., Canada, \$18.36; United States, \$23.95; or an average better price paid to the United States of \$5.59 per M. ft.

Workmen's Compensation Act a Menace

The most important part of the Secretary's report was a reference to the proposed bill for the compensation of injured workmen which is now under consideration by the Government of Ontario. "It is not saying too much" said the report, "to describe this bill as tyrannous, unjust and peculiarly dangerous to the State." The objections taken to the proposed bill by the secretary came under the following heads:

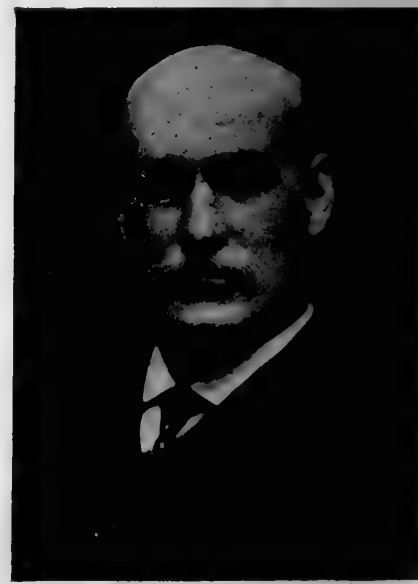
- (a) It abolishes common law rights.
- (b) It vests arbitrary powers in an appointed commission from which there is no appeal.
- (c) It imposes upon the employer the obligation of paying to the injured employee as long as he lives, a sum not exceeding 55 per cent. of the wages paid him at the time of the injury. This payment may be commuted at the discretion of the commission, to a lump sum payment.
- (d) It provides a similar payment to be made to the widow in



The New President—Senator Geo. Gordon.



Gordon C. Edwards—Director.



The Retiring President—Alex. MacLaurin.

the event of the workman's death, for the rest of her life, or until she marries again.

(e) It eliminates all consideration of the point whether the injury was caused through the fault of the employee himself. A workman may deliberately injure himself and collect compensation from the employer. Two workmen may have a quarrel and one may injure or kill the other during working hours. The employer must pay any award made by the commission, not exceeding 55 per cent. of the injured man's wages.

(f) It puts employer and employee in bitter antagonism to each other and is based on the assumption that the employer is the avowed enemy of the working man.

(g) It is the most glaring example of class legislation with which any community has ever been threatened. For instance railways and other companies are exempt from its provisions.

In addition to these objections, a serious matter was the fact that the accident fund would be all provided by the employers. The employees would provide nothing. The government would contribute only towards maintenance of the commission.

No one would deny that a working man injured by accident to which the employer had not contributed, was entitled, not only to every care and consideration but to compensation—generous compensation and humane sympathy. But this should be at the expense of the State and not of the employer. The individual who deliberately injured himself or courted injury by foolish and dangerous practices should not be considered to the same extent.

Because a man was the victim of accident to which the employer had not contributed, why should the employer be compelled to pay the workman an income for the rest of his life?

This bill concerned only the province of Ontario, but if it were passed, unquestionably the labor party would seek the passage of similar acts in other provinces.

Instead of having a provincial law, it had been suggested that the whole case was one for federal action. This would mean a universal indemnity fund provided and operated under a Dominion Act.

Whatever was done, the proposed bill, now before the Legislature of Ontario should be killed before it became law.

The report of the treasurer, which was then presented, showed that the financial affairs of the Association were in a satisfactory state.

The executive committee in its report said:

Credit Rating Service Growing

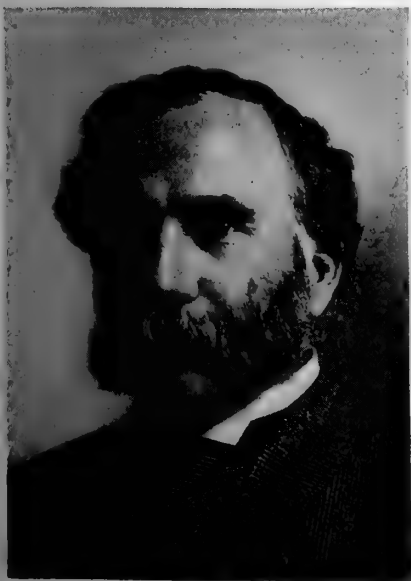
During the year we have had application for credit rating reports on 119 firms, and we believe that this branch of our work is most valuable, and can be made more valuable by sympathetic and prompt replies giving information when asked. A number of our members have been most generous in this respect during the year, and their reports and advice have been much appreciated. There is much ground to be covered, therefore, if the full benefit of this branch of our work is to be derived. Permit a comparison with the National Hardwood Lumber Association on the other side of the line. Their bureau was only started during the year ending June, 1913, and reporting at that time they had over 500 reports on file, and it was said in the President's address that those who have used the department are enthusiastic in their praise of its value. Up to that time no extra charge had been made, but it was felt that to perfect the work and render it more

efficient it might be necessary to make a slight charge for the reports. Since the beginning of the present year we have asked all firms who have hitherto been reported upon to give a statement of their affairs to December 31st, 1913. A considerable number of these have been given to us, and others have said that their fiscal years did not terminate until a little later when they would be glad to furnish a full statement.

One of our members has requested that our reports should be made on a sheet of paper of uniform size so that they could be filed properly. We appreciate the importance of this, but inasmuch as no extra charge has been made for these reports, and no extraordinary appropriation made to get the detail in the hands of our members, we have not felt justified in going to additional expense. Perhaps, now that the late reports are being made by those inquired about, we may be able to make a complete revision of the reports and have them printed in pamphlet form.

We have handled a number of claims during the year for our members, and in all cases, excepting where a man was an absolute bankrupt, we have collected the money. The collection also of railway claims for overcharge is one of our departments, and we invite our members to make use of this branch. We have collected hundreds of dollars, and all it has cost the members was postage on their letters to us. Whilst on this subject, we would urge upon our members in extending credit, that they be guided by the reports before them. Of course the anxiety to sell particularly if the price is attractive, is a great temptation to view trade reports more favorably than the circumstances justify. The tendency too, in a number of cases where the market goes against a man is to either repudiate shipment or make unjust deductions. Terms and conditions should be very clearly specified and insisted upon. In this way misunderstanding would be avoided.

During the year we sent out a circular to our members calling attention to the fact that we were threatened with an increase in fire insurance rates unless means could be found whereby the enormous fire waste could be reduced. It is said on competent authority, that the average loss ratio on saw mills and lumber yards for the past few years has amounted to not less than 80 per cent. of the premiums. We believe as a direct result of the efforts put forth in this direction that there has been an investigation of conditions by the insured and in some cases a general clean up. We understand that several saw mills have had under contemplation the installing of sprinkler systems for the protection of their property. Let us emphasize this point and have a thorough over-hauling and clean up before starting business next spring. It may interest members to know that as a result of an address given by Mr. Franklin H. Wentworth, November 29th last, on the subject of the Significance of the National Fire Waste, a branch of the Ontario Fire Prevention Association was formed in this city. Hon. W. C. Edwards was appointed President, with Mr. C. Jackson Booth 1st vice-president, and Sir Henry K. Egan 2nd vice-president. Whilst not becoming obligated to all the principles enunciated by Mr. Wentworth, that is with regard to the abolition of the wooden shingle and the prohibition of the use of lumber in buildings higher than 10 storeys, there is much that lumbermen can learn by associating with, or forming branches of the Ontario Fire Prevention Association. Whilst on this subject of fire insurance, attention is again called to the report of all insurance in unlicensed companies, Lloyds, mutuals, or reciprocals for the year ending December 31st, 1913, under section 139



G. A. Grier, Montreal—Director



W. G. Power, St. Pacome—Director.



J. G. Cane, Toronto—Director.



P. C. Walker, Ottawa—Director.

of the Insurance Act. This information should be given on forms which are provided by the Insurance Department at Ottawa, and mailed by registered letter addressed to the Supt. of Insurance, not later than March 1st, 1914.

The membership of the Association was shown by the executive committee's report to be as follows:—Ontario, 65; Quebec, 31; Alberta, 1; Manitoba, 2; Saskatchewan, 1; British Columbia, 17.

The Transportation Committee presented a report in which it outlined the events of the past year in connection with matters relating to transportation. Most of these matters are already understood by readers of the Canada Lumberman, as the various events have been reported in these columns.

In reporting upon the matter of car demurrage, the committee recommended that the Canadian Car Service Bureau should be placed under the immediate jurisdiction and operation of the Board of Railway Commissioners for Canada.

Discussing the matter of claims for overcharge, the report recommended that an effort should be made to have incorporated in the proposed amendment to the Railway Act, a clause requiring that carriers shall pay interest on all legitimate claims where payment has been delayed beyond a reasonable length of time.

The report also made reference to ocean freight rates noting the encouraging prospects for the creation of some international controlling body to regulate ocean freight rates in the interest of shippers.

The Association and Its Work

After the presentation and acceptance of the various reports, Mr. Gordon C. Edwards discussed the work of the Canadian Lumbermen's Association. He had heard considerable criticism of late to the effect that the Association was not performing any valuable service for the industry. It was a very serious matter that anyone should give voice to a criticism of this nature and he hoped to hear the matter discussed in detail. His own opinion was that those who complained, were themselves largely to blame for not co-operating enthusiastically with the Association in its work. One of the greatest benefits secured from membership in the association was the good fellowship which it created among men who had formerly entertained rather poor opinions of one another.

Mr. J. G. Cane, Toronto, stated that the advantages secured through the claims branch of the Association were themselves sufficient to establish it in the favor of all members of the lumber industry.

The secretary thereupon reported that the claims branch had handled a number of applications from members and had succeeded in collecting quite a lot of money.

Mr. Duncan McLaren, Toronto, stated that an equally important matter, in which the assistance of the Association was valuable, was the work done by its credit rating branch. He believed that this work would be made of the greatest value to the trade, that it could be of greater value to them even than any of the commercial rating reports they bought elsewhere. If they could only develop the credit rating service and specialize in the ratings of lumbermen, they would quickly see that the association would grow in importance and usefulness. Co-operation from the members of the Association could make this branch of their work so useful that many more members would join.

Mr. W. E. Bigwood, Toronto, said there was no doubt that membership in the Association was valuable to all lumbermen. He also believed thoroughly in the importance and value of a good credit rating service.

A discussion on the importation of southern pine was introduced by Mr. G. A. Grier, Montreal, who urged that something be done to reduce the severe competition from this quarter.

Mr. W. Gerard Power, St. Pacome, P.Q., took the view that southern pine, so far as he was concerned, might come into the country as much as it liked. His company could sell its spruce in spite of the southern pine competition.

The president remarked that, in his opinion, they ought to do something towards educating the architects and inducing them to use Canadian woods.

Mr. Gordon C. Edwards remarked that it was well known in this country that we could not supply the lengths desired and that contractors were compelled to go to the United States or to British Columbia for their timber. It was all very well for Canadian manufacturers of lumber to get together and say that southern pine ought to be excluded by the architects because it was being put down here at two or three dollars a thousand less than Canadian woods. They could not blame the contractors, the southern pine men, nor the members of the association. He believed that architects should specify the use of Canadian woods as much as possible, but did not think they could do any good by trying to exclude southern pine.

Mr. McLaren asked whether the architects were deliberately in the habit of specifying southern pine.

The secretary said that the government tried to use Canadian woods whenever possible. He thought the architects' association

was really trying to use Canadian woods as much as possible. The principal thing for the lumbermen to do was to let the architects see that they were thoroughly alive to the question and that they were keeping tab on it in detail.

Mr. A. H. Campbell said that, in Montreal, he always hoped that a Boston or New York architect, or contractor, would be in charge of any big buildings to be constructed, because they would use spruce, whereas if a Canadian got the job, he would specify southern pine. American lumbermen were accustomed to spruce and were using large quantities of it. Canadian architects and contractors, however, seemed to be afraid of it. He thought that something should be done by the association to induce the contractors, architects, car builders and the governments to use Canadian grown woods, prices being equal.

The president said that he would not want to prohibit yellow pine coming into the country. He believed in every man buying wherever he could buy cheapest. What he objected to was the number of architects who specified yellow pine where spruce or Norway pine could be used to equal advantage.

Mr. Cane said that yellow pine, 2 x 12 in., 16 ft. was being offered in Canada at \$19 and \$21, while we were asking \$25 to \$27 for our Norway. If the situation had been the other way around, the Americans would not sit down. They would legislate against it, if they could not do anything else.

Mr. A. H. Campbell said that he understood the government to have succeeded in specifying Canadian wood for the Welland Canal.

The secretary said that a representation had been made to the government upon this matter, to the effect that wherever Canadian wood could be used on government works, canals, harbor contracts, etc., at an even price, it should be done. After all, the whole thing came down to a consideration of the contractor. If a contractor came to the government and said that he could not get Canadian timber of the size and within anything like the price of the southern pine, the crux of the situation was evident.

Mr. Wm. T. Mason, Montreal, believed that the matter resolved itself entirely into one of price. The best material they could get to-day in timber was fir or yellow pine. If they wanted stock 12 x 12 inch, 30 feet long, how many mills in the Ottawa Valley could furnish fifty pieces? There was not a single mill. The Association would be wasting a lot of time asking governments or architects to specify certain woods on certain contracts. This had been done in connection with the great harbor works at Courtenay Bay, St. John, N.B., and as a result, the work had been held up for several months. To-day, his own firm was figuring upon yellow pine for this work. They were selling millions of feet of fir and yellow pine on large contracts simply because they could not get native woods for the purpose. The price, demand and quality would govern the situation every time.

Mr. A. H. Campbell moved that a committee be formed to get in touch with architects and try to persuade them to give fair treatment to Canadian woods. He did not want any preference. He only wanted the architects to specify that Canadian woods could be used as well as Southern woods. If they would specify "yellow pine or Canadian woods" Canadian would have no cause for complaint.

Mr. John Donogh, Toronto, said that the yellow pine which was coming into such direct and ruinous competition with Canadian woods was the small dimension stuff and the low end No. 2 common, which was being dumped by the yellow pine manufacturer on Canadian markets. The southern manufacturer had found a convenient market in Canada so far as getting rid of their stock was concerned, though not perhaps a financially profitable market. The Canadian wholesaler was getting very little out of this trade. Most of it was done direct or by correspondence. He did not see that they could obtain any remedy by dealing with the architects. It was more their concern to see that this stuff was not dumped upon Canadian markets at lower prices than at the places of origin. He was of the opinion that yellow pine was being sold at very much lower prices in Canada than in the States. Probably six or seven dollars a thousand would represent the average price obtained by the southern manufacturer. He would like to know whether the customs department could not deal with this by finding out whether the stocks were being dumped in Canada.

The secretary said that one of the members of the association had sent him a circular received from a company in Tennessee. The Canadian complained that the prices quoted were dumping prices. He had investigated and had found that at the same time, the same material was sent by the same mill to Buffalo at exactly the same prices.

Mr. W. J. Lovering, Toronto, said that the short leaf southern pine, which was causing so much trouble was full of sap and would rot if it was placed near the ground. Most of the people who used it did not know this. There was southern pine that was quite the equal of our fir, namely, the long leaf pine, but this other stuff was

simply rubbish and could not be compared with any Canadian wood.

Mr. R. B. Elgie, Toronto, seconded Mr. Campbell's motion and upon a vote being taken it was defeated.

The following committee upon resolutions was then appointed: Gordon C. Edwards, Ottawa; William T. Mason, Montreal; W. E. Bigwood, Toronto; A. E. Craig, Toronto; J. G. Cane, Toronto.

The Business Man in Politics

In the afternoon, Mr. A. B. Cruikshank, New York, who represented several of the defendants in the recent actions instituted by the United States government against lumbermen for alleged restraint of trade, delivered a forcible and interesting address upon the business man in politics. Mr. Cruikshank's remarks were necessarily very much condensed on account of the brief time at his disposal, but he succeeded in stirring up great interest among his hearers. The principal point upon which he dealt was the present development of socialistic unrest in the United States. In his opinion, this attitude was nothing new. One might learn from history that it had been practically a constant factor, from the beginning of things, in all countries. It merely happened that conditions in the United States were now bringing more prominently to the front the representatives of those classes, which had been struggling from the very first, to affect the industrial welfare of the country. Mr. Cruikshank pointed out that the material progress of every country was dependent to a reasonable extent upon the men of intelligence and substance, who came to the front at periods of crisis and gave unstintingly of their efforts and ability, for the preservation of financial stability, the maintenance of the sacredness of contracts and the application of labor to its most profitable work.

Mr. Gordon C. Edwards proposed that a committee should be appointed to consider the advisability of developing the credit rating service. The following committee was appointed: A. E. Eckardt, Toronto; Duncan McLaren, Toronto; J. P. Johnson, Toronto; W. T. Mason, Montreal; A. H. Campbell, Montreal; G. A. Grier, Montreal; Mr. J. W. Smith, Pembroke; Mr. J. S. Gillies, Braeside, Ont., and P. C. Walker, Ottawa, who are to report at an early meeting of the board of directors.

Mr. Gordon C. Edwards introduced a discussion upon the workmen's compensation act which is now under consideration by the Ontario Legislature.

Mr. W. E. Bigwood said they might as well recognize the fact that the government was going to pass some kind of bill upon this question. The only thing the lumbermen could do was to make recommendations to the government for securing fair treatment between the employer and employee. He thought that they ought to appoint a committee to draw up the views of the lumbermen upon this question and submit them to the government. It might also be a good thing to work, in this connection, in conjunction with the Canadian Manufacturers' Association.

Senator Geo. Gordon said that each member of the Association ought to interview his local member of parliament and impress upon him the views of the lumbering industry. He also thought that the Association ought to appoint a strong committee with power to employ an able lawyer to look after the interests of the Association when the bill was before the Legislature.

Senator W. C. Edwards said that the proposed workmen's compensation act involved the most vital question that had ever confronted the manufacturers of Ontario. He was not one of those who believed that there should be no such bill, or that there should be no legislation in the direction of giving compensation to those who were unable to take care of themselves. An insurance act framed something along the line of the insurance act of Great Britain would be perhaps the most reasonable thing. The act which it was now proposed to pass, seemed to him to be class legislation of the most vicious character. After all, those who would be affected, so far as compensation was concerned would be a large minority of the people of Canada. A very large majority would be exempt from the operation of this bill. Why should a manufacturer, who, unfortunately, had a man injured in his employ, be any more subject to the payment of compensation than one who had a gardener, or anyone else working around his house. It seemed to him that the proposed bill was socialistic legislation of the worst character. If it went into effect, it would make a large minority of the people in this country—the manufacturers alone—responsible for all the accidents which occurred in their employ, whether the result of carelessness on the part of the manufacturer, or on the part of the individual himself. How could there be anything more unjust or more unreasonable? However, legislation of this class had already been enacted in most of the countries of Europe and the United States. All that could be done in Ontario would be to modify the proposed legislation to the greatest extent possible. The manufacturers could assure themselves that they would come out second best, without a doubt. If the bill as at present drafted were put into effect, it would put a premium upon the reduction of industrial efforts in Ontario. In many employments the

bill would close up factories, as it would be impossible to operate them under such conditions.

Mr. E. F. Perry, secretary of the National Wholesale Lumber Dealers' Association, who was in Ottawa, spoke briefly upon the same subject.

A motion was then carried to refer the matter to the board of directors with power to add to their numbers.

Mr. E. F. Perry then spoke upon the importance of the approaching Forest Products Exposition, urging the association to assist in its success.

Resolutions Passed

The committee on resolutions, which had held a separate meeting, presented the following resolutions which were carried:

That the Canadian Car Service Bureau should be placed under the immediate jurisdiction of, and be operated by, the Board of Railway Commissioners of Canada;

That the association express its appreciation of the attitude of the railway companies in conferring with the officers of the association in connection with tariffs affecting lumber interests;

That the transportation committee be authorized to take such steps as may be necessary to watch legislation brought before the Dominion parliament, affecting lumber shipments, and to arrange that the association be represented at any public meeting in this connection;

That the sympathy of the association be extended to Mr. J. R. Booth, in his recent suffering and that the thankfulness of the association be expressed in his recovery, also the hope that he will long be spared to work among them;

That a committee of three members be appointed to co-operate with the head office of the association in compiling statistics, relating to the lumbering industry in Canada, with authority to formulate a plan and put it into operation at as reasonable a cost as possible, the work to be done by the executive officers of the association, rather than by a committee;

That the thanks of the association be extended to Mr. R. G. Cameron for his services as honorary treasurer.

With the unanimous approval of those present, Senator Geo. Gordon, Cache Bay, Ont., was elected president of the association for the ensuing year. The nominating committee then presented its report which was accepted. The full list of officers for the ensuing year is as follows:—

J. R. Booth, honorary president; Senator Geo. Gordon, president; His Honor Sir. D. C. Cameron, K.C.M.G., Winnipeg, first vice-president; Angus McLean, Bathurst, N.B., second vice-president; R. G. Cameron, Ottawa, treasurer; Frank Hawkins, Ottawa, secretary.

Directors: Alexander MacLaurin, Angus McLean, W. Gerard Power, and Geo. A. Grier, representing Quebec; Senator Geo. Gordon, Gordon C. Edwards, E. A. Dunlop, W. C. Laidlaw, P. C. Walker, E. R. Bremner, Duncan McLaren, A. E. Craig, J. G. Cane, and W. J. Lovering, representing Ontario; John Hendry, A. D. McCrae and Wm. McNeill representing British Columbia; His Honor Sir D. C. Cameron, K.C.M.G., representing Manitoba, and A. L. Mattes representing Saskatchewan.

Banquet at the Chateau

In the evening a most enjoyable banquet was held at the Chateau Laurier, at which a large number of guests were present. The occasion was the first upon which ladies were invited to attend the banquet of the association and their presence added greatly to the pleasure of all present.

The new president, Senator Geo. Gordon, occupied the chair. The guests of honor seated upon his right and left included Hon. Geo. E. Foster, Sir Wilfrid Laurier, Hon. W. G. Hearst and Alfred B. Cruikshank of New York. Others at the table were Senator W. C. Edwards, Sir Henry Egan, E. F. Perry of New York, Gordon C. Edwards, W. A. Charlton, M.P., Wm. Thoburn, M.P., and Alexander MacLaurin.

Sir Wilfrid Laurier, the first of the speakers, dealt in a very interesting manner with the history of the lumbering industry in Canada. He believed that, with proper caution, the lumber industry in the Ottawa Valley would last until the end of time. After dealing with the various factors of danger which so frequently lead to the destruction of our forests, Sir Wilfrid suggested that a forestry congress should be held and that it should urge the carrying out of a thorough surveying of the water sheds and forest lands of Canada. The lands ought to be marked out definitely. Those that were fit for settlement and those that were not fit for it being strictly separated and the latter being set aside absolutely for the use of the lumbermen.

Hon. Geo. E. Foster drew an interesting comparison between the lumbermen of to-day and those of fifty years ago. His remarks were along lines somewhat similar to those of Sir Wilfrid Laurier. He expressed himself in favor of reforestation, but laid far greater stress upon the importance of conservation. He suggested that it might even be a wise step to consider the prohibition of the cutting of any more logs in the forests of Canada than were actually required for

the production of the lumber for which there was a demand in Canada. He did not put this forward as a definite plan to which he would commit himself, but rather as something which might indicate to his hearers the great importance which he attached to matters of conservation.

An excellent address was also given by Mr. A. B. Cruikshank of New York.

Important Changes Coming in Ontario

Hon. W. H. Hearst, Minister of Lands, Forests and Mines for the Province of Ontario, speaking of the forest resources of the province, appealed to the lumbermen to join hands with the different provinces and with the Dominion government in doing everything within the bounds of reason to conserve the great forest heritage of the country. In the province of Ontario they obtained half their revenue from timber, and without it, they would be face to face with the problem of direct taxation in some form or other. This was still more true in connection with the province of British Columbia. During the present year, Mr. Hearst said, he was setting himself resolutely to the task of trying to preserve the forests of the province from fire. He intended to establish superintendents who would have charge over all the rangers, would help them in the discharge of their duties and keep them in close touch with the department. He intended to proceed with the establishment of telephone services and lookout towers wherever practical in the province of Ontario. He would purchase gasoline boats and gasoline speeders and in many other ways he intended to make protection of the forests more effective than it had ever been in the past. The government could not do everything, however. The lumbermen must co-operate with them. Unless they had the sympathetic support of the people of Ontario, the money they were spending would not produce much in the way of results.

Hon. W. A. Charlton, president of the Canadian Forestry Association, expressed his appreciation of the progressive work which the Canadian Lumbermen's Association was doing.

Canadian Forestry Association Meeting

The 16th annual business meeting of the Canadian Forestry Association was held at Ottawa on February 4th. The principal business attended to was the passing of resolutions and their presentation to the Prime Minister and the Minister of the Interior. The resolutions adopted were as follows:—

Commending the Dominion government for extending the areas included in forest reserves on water sheds and non-agricultural land.

Recommending an examination of timber bearing lands, with a view to deciding whether they are best suited for the growth of timber, or whether their opening up would endanger the timber.

Recommending the extension of the fire ranging service, and that rangers should be selected on the basis of their special qualifications for the work.

Approving of the effective manner in which the Dominion Board of Railway Commissioners and the officers of the leading railway companies of Canada have worked together for the prevention of forest fires.

Recommending that the Dominion and Provincial governments conduct experiments to find out the best methods for disposing of debris resulting from lumbering operations.

Expressing the opinion that all appointments in the forest services of the Dominion and Provincial governments should be based upon capacity and experience.

Thanking the Dominion government for establishing a wood products laboratory and tendering co-operation in connection with its development.

These resolutions were presented to the Prime Minister and the Minister of the Interior by a deputation headed by W. R. Charlton, M.P. The Prime Minister and the Minister of the Interior each promised to give the resolutions immediate consideration.

The report of the directors of the Canadian Forestry Association for the year 1913 showed that considerable progress had been made in the work of the association. After referring to the successful convention held in Winnipeg and to the increased importance of the publication work of the association, the report stated that the work of forest protection and reforestry had made steady, if not



Wm. Power, M.P., Quebec, the new President.

rapid gains, in 1913. The Dominion government had appropriated \$514,000 for the work of the Dominion Forestry Branch. This work had been carried on with an increased staff, particularly in the field, the number of men in the outside service being 360, of whom 25 were technically trained. Patrolling and trail and telephone building had been carried on more extensively than ever before. The fire loss was the smallest in the history of the department, the amount burned over being only one fiftieth of one per cent. of the reserve area, of which only fifty acres was matured timber.

In Ontario, the government had spent on forest protection and development \$234,000, and the limit holders \$91,000, making a total of \$325,000. This had been spent chiefly in patrol work, 925 men being employed, 560 by the government and 365 by the limit holders.

In the province of Quebec, the amount appropriated for forest administration had been \$100,000 and \$18,000 additional for the fire protection branch. Limit holders had spent in the neighborhood of \$150,000 for their share of protection.

In British Columbia the forest protection fund, contributed equally by the government and the lessees had amounted in 1913 to \$375,000. During the year, 415 rangers had been employed, in addition to 60 employed by the railways. In the autumn, these men had been employed in cutting roads and fire lines, erecting telephone lines and lookout stations. In this way, by the autumn of 1913, 1,205 miles of trail and 529 miles of telephone line had been constructed.

In New Brunswick about \$35,000 had been spent by the government on forest fire protection, in addition to the amount which was spent by license holders.

Progress was noted in protection by private individuals and corporations throughout the Dominion. The locomotives on 587 miles of railway had been changed from coal burners to oil burners. These lines are in the Rocky Mountains and on Vancouver Island.

The directors report that lumber and pulp companies were cutting timber with less waste than ever before. A number of them were having their holdings surveyed and estimated by forest engineers and some were beginning to experiment in thinning and replanting.

The use of wood preserving methods was rapidly increasing.

The educational side of the work was also referred to, the directors noting that a development of lower grade schools, to educate forest rangers and woods superintendents was now the most pressing educational need.

The election of officers for the ensuing year resulted as follows:—President Wm. Power, M.P., Quebec, P.Q.; vice-president, F. C. Whitman, Annapolis Royal, N.S. New directors, Hon. W. J. Roche, Hon. Geo. E. Perley, A. C. Flumerfelt, Vancouver, B.C.; Hon. Nathaniel Curry, Rt. Rev. P. E. Roy, Quebec, P.Q.; H. R. MacMillan, Victoria, B.C., and Clyde Leavitt, Ottawa.

The next convention will be held, at the invitation of the government of Nova Scotia, in Halifax, next August.

It is interesting to note that the Prime Minister asked the opinion of the Association regarding a proposal for holding a National Forestry Congress. The Association discussed this matter at its afternoon session and decided in favor of the proposal, giving it as their opinion that it should be held next winter. This conclusion was communicated to the Prime Minister, who has not, as yet, indicated his intention further.

John R. Booth Again at the Plant

John R. Booth, the veteran Ottawa lumberman, who recently sustained a fracture of his left leg and several minor injuries, when a heavy timber fell upon him, has made such good recovery that he was recently able to rejoice all his friends, and especially those at the office and plant, by visiting the works in a conveyance. His only regret at the time was that his crutches had been left at home and he could not get out and examine the new buildings more closely. With fair weather and continued improvement in his health, Mr. Booth will be back at work again in the near future.

Nova Scotia's Industries Illustrated

A very attractive illustrated booklet describing the various manufacturing industries in the province of Nova Scotia has been published by the Nova Scotia Publicity Committee of the Canadian Manufacturers' Association. The book is contained in a very handsome colored cover illustrating a busy harbor scene in Nova Scotia. The majority of the material in the book consists of illustrations of the various important plants throughout the province. The most important idea that one gathers from the book is the fact that the industries of Nova Scotia are extremely varied and have been developed to a remarkable degree of efficiency. One may also gather the fact that one of the most important industries in the province is that connected with the manufacturing of lumber and the conversion of its product into finished materials. A copy of this booklet may be secured by writing to the Secretary of the Publicity Commissioner at Halifax.



Sawmill of the New Ontario Colonization Company,
Jacksonboro, Ont.



Pulpwood Rossing Plant of the New Ontario Colonization Company,
Jacksonboro, Ont.

New Ontario Company's Fine Equipment

Will Operate Winter and Summer at Jacksonboro—Rossing Mill, Planing Mill and Sash and Door Plant Included

Readers of the Canada Lumberman are already familiar with some of the operations of the New Ontario Colonization Company, Limited, whose mill is located at Jacksonboro, Ont., and whose sales office is at Buffalo, N.Y. An illustrated article appeared in these columns last year, describing the small lumber manufacturing plant erected and operated by this company in the earlier stages of its work. This mill served the purpose of producing lumber for the larger mill and also for the office buildings for the company and dwellings for the first settlers. The New Ontario Colonization Company, Limited, purchased from the government of Ontario the townships of Kendrey and Haggart, covering about 100,000 acres. The Transcontinental Railway or what would be called the Grand Trunk Pacific, runs through both townships and the company are to remove the timber and colonize these townships. Their manufacturing operations and camps are located at the junction of the Mattagami River and Transcontinental Railway.

As will be seen from the illustration, the company have a good smart sawmill. It is equipped entirely with new machinery, including a double cutting band saw and a resaw. The capacity of the mill is 50,000 feet per day. A pulpwood rossing department is operated in connection with the sawmill. Its capacity is 50 cords of pulp wood per day. The company are also operating a well-equipped planing mill, sash and door plant, etc. The timber upon which they are operating runs largely to spruce, whitewood and brown poplar. It includes also some tamarac. The spruce is an excellent quality with close grain and takes a smooth dressing. The larger run of spruce will be put into lumber and the balance into pulpwood. The whitewood, brown poplar and tamarac will be put into lumber.

The company have a large hot pond from which their saw logs and pulpwood will be taken. They will thus be able to operate throughout the winter. In connection with the mill at Jacksonboro, the company also conduct a general store.

Although the lumber manufacturing end of the company's work is of great importance, the company is essentially a colonization proposition and points out with interest that the soil in both of its town-

ships is of excellent quality, the top soil being black loam and the sub-soil a clay loam. They are confident that the rich soil with the long, hot summer days, will bring very satisfactory results from an agricultural standpoint. In fact they have already demonstrated this to their own satisfaction. The company already have a number of settlers and prospects for many more. Many will be located during the coming spring and summer. The company will be able to use their labor and hire their teams when they can be spared. In this way they believe that there is nothing to prevent settlers from making good in the clearing and cultivation of their land during the summer, and turning to advantage their own services and those of their teams in either the mills or in the woods, during the winter.

Further interesting facts in connection with the sawmill may be mentioned. It has two log slides or jacks, one of which carries the logs to the sawmill and the other to the rossing mill. The double cutting band mill was manufactured by the Wm. Hamilton Company, Peterboro, Ont. The resaw is a timber resaw, manufactured by the Berlin Machine Works, Hamilton, Ont. The balance of the sawmill machinery was put in by the E. Long Manufacturing Company, Orillia, Ont. All of the machinery on the pulpwood rossing side of the mill was put in by the Waterous Engine Works Company, Brantford, Ont. The power plant, consisting of three large boilers and engine, of 450 h.p., was purchased from the Wm. Hamilton Company, Peterboro.

The planing mill is thoroughly equipped for dressing lumber and manufacturing sash and doors, flooring, etc. A large portion of the machinery, including the planing mill resaw was purchased from the Berlin Machine Works, Hamilton, Ont., and the balance from Cowan and Company, of Galt, Ont.

The company have an excellent yard for seasoning their lumber and the stock will be put out from the transfer table over a tram. By running both winter and summer, the company will be able to furnish the trade continually with good bright lumber.

From the above facts it will be seen that the prospects for the New Ontario Colonization Company are exceptionally bright.



View of one of the trams, New Ontario Colonization Company,
Jacksonboro, Ont.



Store, Office and Boarding House, New Ontario Colonization Company,
Jacksonboro, Ont.

The Commercial Importance of Poplar

Second of a Series of Articles Upon Native Canadian Woods—Characteristics and Uses of a Wood That is Not Generally Appreciated

By R. G. Lewis

IT has been said that a weed is not necessarily a useless plant but rather one for which no use has yet been found. There are a number of trees in Canada that have been considered as weed trees for many years and would still be considered as such but for the increasing scarcity of wood and its rapid rise in price. When the supply of the more desirable, more easily utilized woods, begins to fail to meet the demand, manufacturers must turn to the "weed trees" and study new ways of adapting these to their purposes.

Basswood is valued chiefly on account of its toughness and its power of holding its shape. Tulip or "yellow poplar" has similar qualities and in addition is very soft and easy to work. Red gum, on account of its cheapness and the fact that, once properly seasoned, it holds its shape well, is often substituted for basswood and tulip. The wood of most of the poplar species possesses these characteristics to a greater or less extent and when properly seasoned can be used as a substitute for basswood or tulip just as well as the imported red gum.

In addition to its use as a substitute for other woods, poplar is preferred by some manufacturers for certain purposes above all other woods because of its own particular qualities. Poplar is considered to be the most suitable wood for the manufacture of excelsior and wood wool because of its softness, toughness and elasticity. While poplar is not among the most important hardwoods (broadleaved trees) of Canada, its use is increasing every year as new uses for the wood are being developed.

Increasing Use of Poplar Lumber

The use of this wood for lumber in Canada increased from 1908 to 1912 by over sixteen per cent., an average annual increase of over four per cent. Its use for pulp manufacture has increased at a much greater rate. Canada cut, in 1912, 180 per cent. more poplar pulpwood than in 1908, an average annual increase of 45 per cent.

In 1912 Canada cut 7,523,000 feet board measure of poplar lumber valued at an average price of \$13.30 per thousand feet. The wood has been reported from every province in the Dominion but the greatest quantities are cut in Ontario, Quebec and Manitoba. During this year 4,405 cords of poplar pulpwood were consumed by Canadian pulp mills at an average price of \$6.20 per cord. This would approximately represent 2,440,000 feet board measure.

During 1912 Canadian slack cooperages manufactured over six million poplar barrel staves, over three hundred thousand sets of barrel heading, and over a hundred thousand hoops, representing at least two million board feet of lumber.

At least 5,000 cords of poplar are annually manufactured into excelsior in Canada, which represents a consumption of 2,770,000 feet board measure. These four items make a total of 14,733,000 feet of poplar cut in Canada in a year. When we consider the quantities of this wood used for firewood, for fence posts and rails and exported as unmanufactured pulpwood, we can safely estimate the total cut of poplar at 25,000,000 feet, which is a small quantity compared to the existing supply.

The Commercial Species of Poplar

There are eight species of poplar which reach tree size in Canada, and of these, two or possibly three species form the bulk of the wood cut commercially. The wood of the poplars, speaking generally, is soft, light in weight, tough, easily worked and both tasteless and odorless, but is weak and very perishable in moist situations. Owing to its weight, when green its slippery bark and the high percentage of defect, the logging of this wood is expensive; at least twenty per cent. more so than spruce. This fact explains the relatively high price of poplar lumber and its scarcity on the market. The difficulty in seasoning the lumber after sawing also tends to decrease its popularity, but, if proper care is exercised this difficulty can be overcome. The lumber does not shrink while seasoning but checks and warps badly. Once properly seasoned it holds its shape well, can be nailed without splitting and resists friction to a remarkable extent because of its compactness and its tough fibres.

Commercially, the poplar lumber is usually divided into two classes, aspen and cottonwood, which have different properties and are used for different purposes. The aspen lumber is made up of the wood of two species, common aspen and large-toothed aspen.

Distribution of the Common Aspen

Common aspen (*Populus tremuloides*) is found south of a line running through the Labrador peninsula, around the south of Hud-

son Bay and northwest to the mouth of the Yukon river in Alaska. It is found south of this line throughout Canada and the United States as far south as Missouri and Southern California. It is probably the most widely distributed tree in North America. It is abundant throughout its entire range and reaches its highest development in Northern Alberta and Saskatchewan.

Large-toothed aspen (*Populus grandidentata*) has a much more restricted range than common aspen and is nowhere so abundant. It is found from Nova Scotia to the Riding Mountains in Manitoba, south of the height of land in Canada and southward to Delaware in the United States. It is not of great commercial importance as it does not reach the size attained by common aspen and it is usually sold mixed with this species which it closely resembles.

The wood of the aspens has perhaps a finer grain than that of the cottonwoods and is usually lighter in color. It is not quite so strong nor tough as balm poplar, otherwise there is little difference in the structure of the two woods. The aspens, however, are very liable to attack by a fungus known as the "false tinder fungus" (*Polyporus ignarius*) which causes great damage to trees over 20 years old in Canada; in some cases rendering useless, eighty per cent. of a stand. The tree, however, is not subject to frost cracks and wind-shake which cause considerable damage to balm poplar. The wood of the aspens makes excellent firewood, burning while green, without sparks, and producing a hot, quick fire. Probably more aspen is used



Balm Lumber in pile, showing prevalence of Wind-Shake and other defects

for firewood than for any other purpose, although small material is often used that would be of little use for other purposes.

The greater part of the poplar wood used for pulp making is of the aspen species. This wood makes a weak, light-colored, pulp, easily bleached, and is usually treated by the soda process. This chemical process, when applied to spruce, merely separates the fibres from one another and does not impair the strength of the individual fibre. When applied to poplar, however, it breaks down the fibre and produces merely a pulpy mass without any cohesive strength. This pulp is mixed with spruce or some other tough sulphite pulp in the proportion of 60 per cent. poplar soda pulp and 40 per cent. spruce sulphite. This makes a very superior, tough, white paper, easily sized, and much cheaper than rag paper. It is the most economical book and magazine paper made. The poplar pulp in reality adds only body to the paper as it lacks a long tough fibre like that of spruce and could not be used for paper without the tougher pulp to bind it together.

A Superior Wood for Cooperage

As a cooperage wood, aspen ranks among the best, especially for barrels to contain food stuffs, such as flour, sugar, fish, meats, etc. It is not so strong or tough as elm and birch, but is easily worked and imparts neither taste, stain nor odor to the contents of the barrel. This wood has also been reported as having been used in this connection for candy and lard pails, spice kegs, sugar and jelly buckets, in Canada and in the Eastern United States.

For excelsior, aspen poplar is the favorite wood in Canada and in most of the States. The wood is soft and tough and the excelsior

made from it has the softness and elasticity necessary for the purposes for which this commodity is used. Excelsior is made by peeling narrow strips or ribbons from billets of wood. The wood is usually barked and cut into lengths to fit the machine. The product is called "wood wool," when the ribbons are narrow and thin (1/100 of an inch thick) and is used for upholstery. The coarsest excelsior is used for stuffing mattresses, packing china and other fragile commodities, and, in the form of shipping pads or sheets of excelsior covered with wrapping paper, for protecting furniture and other crated goods in transit.

In the form of lumber, aspen is used for rough construction in regions where other woods are scarce. Its lack of durability when exposed to moisture prevents its use when more durable woods can be obtained. It has long been valued for barn and stable flooring and for stalls, as its toughness resists the wear due to knawing and stamping of animals. For interior house flooring this is a valuable wood when properly seasoned. It has a fine, close grain, holds its shape, and does not splinter or wear rough. Its white color is an attractive feature. For other interior house decorations aspen is used in the form of ceiling, moulding, wainscoting and panelling, as it is easily worked and takes paint well.

For boxes aspen is valued for the same reasons that make it a popular cooperage wood. It holds nails without splitting, is light, tough and free from taste, stain or odor. These qualities also fit this wood for refrigerator lining. It is used for butter and meat boxes, cheese box heading and boxes for all kinds of food stuffs as well as tobacco and cigars. It is often preferred by shippers on account of its white color and the fact that it is easily stencilled, making an attractive box. It is used for crating materials on account of its toughness and lightness. On account of the fact that it does not stain it is preferred for the crating of ornamental stone. Aspen is used to a great extent for cloth boards, as it is light and does not splinter nor wear rough.

The use of this wood for "inside work" on furniture and for box and body work on vehicles and agricultural implements provides a substitute for basswood and yellow poplar (tulip), which are now becoming scarce and expensive. Its use for this purpose is not so important as the use of the cottonwood poplars.

Aspen poplar is used in some of the northern states for matches, although its use in Canada for this purpose has not yet been reported. Large quantities of aspen poplar in Russia and Scandinavia are annually manufactured into matches or exported as match splints or blocks to all parts of the world. Swedish, Russian and Norwegian safety matches, so commonly used in Canada, are all made from aspen poplar.

Aspen is demanded by certain manufacturers for certain purposes, some of which are peculiar. Manufacturers of oyster and fish knives demand this wood as they claim that handles made of it will not slime. Mirror and glass polishers use aspen blocks to polish mirrors because it is soft and wears quickly and carries the polishing powder or "rouge" without clogging up and glazing over. In addition to the above, aspen wood has been reported for the manufacture of baskets, brush backs, caskets, dipper handles, dishes, dowels, rough boxes (or shells), shoe findings, spools, toothpicks and toys.

The Uses of Balsam Poplar

Balsam poplar (*Populus balsamifera*), or "balm" as it is often called, is the second most abundant poplar species in Canada. The tree is found further north than aspen in eastern Canada, but not so far north in the west. Otherwise it covers practically the same range as aspen, but is never so abundant. Balsam poplar demands a richer, moister soil than aspen and is, therefore, confined more to river bottoms. It reaches its highest development on the islands and alluvial flats of the Peace, Athabaska and other Mackenzie river tributaries. It is probably the largest subarctic tree in America.

The wood of this tree is usually sold with the cottonwoods which it resembles closely. It is stronger and tougher than aspen, is not liable to attacks of the false tinder fungus, but is subject to wind-shakes and frost cracks. It is very poor firewood and is not used for flooring on account of its dirty color. However, this wood is considered more valuable for lumber than aspen, probably because of its greater strength and freedom from defect. Because of its color, it is not used to any extent for pulp when aspen is obtainable, but is a valuable material for excelsior, box boards and slack cooperage. This wood is used instead of aspen wherever greater strength is required. It is preferred to aspen for veneer in the making of baskets and berry boxes in the Maritime Provinces, Ontario and the Northern States. It is also reported for tobacco and cigar boxes, three-ply trunk boxes and veneer barrels.

These two species probably form ninety per cent. of the poplar used in Canada east of British Columbia.

An Important British Columbia Species

Black Cottonwood (*Populus trichocarpa*) grows in open groves

along the banks of streams and lakes on the Pacific coast from southern Alaska southward through western British Columbia, east to the Columbia valley and southward to California. It mixes with balsam poplar in eastern British Columbia and reaches its highest development near sea level on the coast. It is the largest broad-leaved tree (hardwood) in British Columbia, reaching the height of 200 feet and a diameter of 7 to 8 feet, being the tallest and one of the largest of all the poplar species. Being soft and compact, the wood has always been a favorite with the Indians for making dugout canoes, apart from the fact that large, clear trunks can be readily obtained.

Being the only soft non-resinous wood on the Pacific coast, the black cottonwood is used for more purposes than the eastern poplars. It is the only substitute obtainable for basswood and yellow poplar, and is used in place of these woods to a great extent.

The wood is greyish white, soft, odorless, tasteless, straight and even-grained, very light, long-fibred, readily nailed, glued, and veneered. It resists shrinking, swelling, warping and splitting, and is much superior in its physical qualities to the aspens or balsam poplar. It is used to the greatest extent for boxes, pulp, excelsior and slack cooperage. This wood is used for the same purposes as the aspens and balsam poplar but to a greater extent. It is the only available wood for core stock and cross banding in veneered furniture, fixtures and interior finish. Pack saddles and pulleys are made of this wood as it nails without splitting and holds its shape. Its good qualities are better understood and taken advantage of in the western States than in British Columbia where the wood is little used except for boxes and cooperage.

Common cottonwood (*Populus deltoides*) is nowhere abundant in Canada. The tree is found in parts of southern Quebec and Ontario, but much of it has probably been planted. It is also found occasionally in the river bottoms in southern Alberta. It is really not of commercial importance in Canada except that large quantities are imported from the United States where the wood is of great commercial value. With the black cottonwood of the Pacific coast and the southern swamp cottonwood this is considered to be the most valuable poplar lumber tree. Its wood is stronger and tougher than the aspens or even balsam poplar which is usually classed with the cottonwoods. It is difficult to season but repays any trouble or expense that a careful seasoning process may involve.

Cottonwood lumber has long been understood and appreciated in the middle west and southern States. A list of its uses would fill a volume and include all the uses to which a strong, soft, non-resinous wood could be put.

Suggestions for Manufacturers

Some of these might be valuable suggestions to manufacturers who import basswood and tulip when balsam poplar (in the East) and black cottonwood (in British Columbia) are plentiful close at hand. The wood is considered to be the best substitute obtainable for tulip for waggon beds and bodywork, and is becoming scarce even in Arkansas (the State producing the most of this material). Furniture frames and exposed parts of kitchen furniture are made of this wood. Ironing boards, clothes racks, chair dowels, washboards and kitchen woodenware are made from a light, soft wood that will not splinter or wear rough. Cottonwood is the cheapest and best material obtainable. Bake boards, saddlers', harness makers' and shoe makers' boards; cigar makers' boards and boards and table tops of all kinds on which cutting tools are used, are made of cottonwood because it is compact, holds its shape and does not dull the tools.

Three other poplars are found in Canada but are of no commercial importance. Two western cottonwoods are found in the river bottoms in southern Alberta and Saskatchewan but are only used locally for fuel and fencing. A rare and unimportant species is confined to Vancouver Island, but is small and of no commercial value.

Vigorous Reproduction and Rapid Growth

Poplar, with birch, has the reputation of being one of the first trees to take possession of burned or cut-over forest land or abandoned farm land. Trees twenty years old bear abundant seed. The flower buds become conspicuous in the fall and develop into catkins in the early spring, ten days before the leaves appear. The seeds ripen and are scattered by the wind about the time the leaves are beginning to unroll. The seeds are very minute and are covered with cottony hairs which bear them up so that they fly like light snow. Considering that the seed-bearing flowers and the pollen-producing flowers are on separate trees, or that the trees are of different sexes and that only about half the trees can bear seeds, the seeding capacity of the poplars is remarkable. Many of the seeds are abortive, the fertile seeds lose their germinative capacity in two or three weeks and the seeds cannot germinate except on the raw mineral soil free from undecayed vegetable matter. In spite of these drawbacks, the poplar spreads enormous numbers of seeds in its vicinity and usually obtains a foothold in the same year in which the seeds are produced. This accounts for the fact that poplar seedlings spring up in the late summer and early fall on areas that have been burned or cleared in the early part of

the same year. The seeds are very light and are carried great distances by the wind. The seeds of trees growing along river bottoms fall into the stream during high water and are carried many miles downstream and deposited on the low, flat river bottoms by the falling waters, where they sprout readily. This partly accounts for the prevalence of the cottonwoods on river flats. The poplars sprout readily from root suckers when the older trees have been cut down or burned. These sprouts grow very rapidly at first, but seldom reach tree size.

The poplars are very rapid growing trees but only in their youth. They are very intolerant of shade and, if crowded, die quickly; but if they are well established they grow very rapidly for twenty or thirty years. They are a great benefit to other tree seedlings that grow with them as they have open crowns which admit an abundance of light for more tolerant species such as spruce. Thus the poplar acts as a nurse tree for the more slow-growing evergreen tree. The poplar soon begins to decline and at the age of seventy to a hundred years, when the spruce is in its prime, the poplar has all died off.

In the east, poplar reaches a diameter of six inches on the average in twenty to fifty years, and the twelve inch diameter in from fifty to one hundred years.

The average size attained by trees in the east is from 60 to 70 feet in height and from 18 to 24 inches in diameter. Few trees exceed the 100 year age limit. The average mature stand, clear of defect, is from 70 to 80 years old.

The greatest damage to the living tree is caused by fire, fungi, wind and insects. Frost has little effect on aspen and its effect on balsam poplar, while reducing the value of the lumber, does not seem to injure the health of the tree to a very great extent.

The poplar in the east, as a planting proposition, is very attractive. While the wood is of little value compared to slow-growing species, its value is increasing with its increasing uses.

The value does not depend altogether on the size of the material, as small sizes are sufficient for most of its uses. The tree grows very rapidly up to 20 or 30 years, and the materials from thinning can be utilized from the start. The final crop is utilized more completely than that of any other wood. These facts combined with the fact that this tree will grow in medium or poor soils makes it at least a commercial possibility from the standpoint of forest planting.

In the west the aspens and cottonwoods grow less rapidly at the start but are longer lived and reach greater size than those in the east.

Building Permits Decreased During 1913

During the year 1913 the building permits granted in fifty cities in Canada were for a total value of \$167,518,614. During the year 1912 the total value was \$201,161,550. There was thus a decrease of \$33,642,936. An analysis of the reports shows that Toronto is still at the head of the list. The total value of Toronto's building permits for the year 1913 was \$27,038,624. Montreal came very close to this, with a total of \$27,032,097. Montreal's total is all the more interesting because it showed an enormous increase, the total for 1912 having been \$19,408,600. Toronto permits were practically identical in value with those of 1912. Going back over a period of six years, to the year 1908, Toronto's building permits have increased from nearly \$12,000,000 to a little over \$27,000,000. The total values of building permits in Toronto for the six years from 1908 to 1913 was over \$121,000,000. After Toronto and Montreal the following cities rank in order so far as the total value of permits is concerned:—Winnipeg, Vancouver, Edmonton, Calgary.

In the Maritime provinces the most interesting feature is the great increase at St. John, N.B., from \$566,200 in 1912 to \$2,380,660 in 1913.

In the city of Quebec, building permits for 1913 were more than double those for 1912, the total being \$1,929,781. The building permits of greater Montreal reached a total of \$35,000,000.

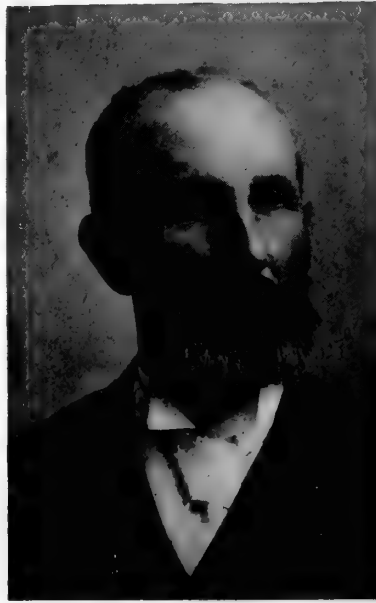
The aggregate amount of building in Ontario cities during 1913 showed practically no change, the total for nineteen cities being \$51,546,101 as compared with \$51,486,204 in 1912.

With few exceptions, the cities of Western Canada showed decreases.

To Increase Rates on Pulpwood Shipments

The Dominion Board of Railway Commissioners have issued an order allowing the Temiscouata Railway to increase its charges on pulpwood shipped from stations on its line to points in New York State and other points reached by the C. P. R. The increase authorized, and which was protested against by the Eastern Townships Lumber Company, is one-half cent per hundredweight. It was the desire of the railway to have the increase come into effect on January 24. The Board has decided, however, that there should be a reasonable time allowed for the completion of contracts, and has ordered that the new rates shall not be effective until August 15, 1914.

Death of J. H. Redfern, Montreal



The Late J. H. Redfern, Montreal

By the death of Mr. J. H. Redfern, at the age of 76, Montreal has lost its oldest retail lumber dealer. For 42 years he was in business in that city, building up with others a very extensive trade. Mr. Redfern was a native of Douglas, Isle of Man, and when sixteen years of age went to Troy, New York, where he lived for about 15 years, being engaged in the lumber business. From there, he went to Three Rivers, P.Q., to look after the lumber interests of the Hon. J. K. Ward.

The next move was to Montreal, where he entered into partnership with Mr. Ward as retail lumber dealers. About 13 years ago Mr. Ward died, and Mr. John Ward and Mr. C. I. Root became partners with Mr. Redfern, under the name of J. K. Ward and Company. Subsequently Mr. J. Ward and Mr. Root withdrew, and Mr. Redfern carried on the business alone, and continued to do so

under his own name, until his death.

Mr. Redfern was a man of great energy, devoting almost his entire attention to the business. Two years ago he had a very severe illness from which he never fully recovered. Notwithstanding his ill health, Mr. Redfern continued to stick to business, and could not be persuaded to take a prolonged rest. A little over five weeks ago he became worse, and was compelled to keep within doors. From then on he failed gradually and succumbed to nervous trouble.

Mr. Redfern was never married. He had no relations in Canada, but some on the other side. At one time he was a member of the Westmount Council, and also Mayor of that city. From 1899 he was a member of the Westmount Library Committee.

The land on which the yards stand is the property of the Ward estate, but Mr. Redfern's business and effects are, under the will, to be sold within eighteen months.

New York Markets More Promising

Chase, Talbot & Company, New York, in their Lumber Market Letter under date of February 2nd, say: Thus far we have experienced no winter storms, and while the usual February severity is expected, still, building operations can only be briefly delayed. The steel trade has generally been considered a barometer, and, as greatly increased tonnage engagements for steel have recently been booked, we may soon expect the common gossip of the lumber trade to take definite shape, with a call for numerous early spring shipments. Maine and West Virginia spruce mills are holding prices firm, but we regret to report that the yellow pine operators in the south appear to need business so badly, that they are willing in many instances, to cut to ridiculous figures. An influential dealer and buyer in large quantities, stated to the writer to-day, that some of the yellow pine salesmen were "talking up prices," but when it came to actual business (even if for May to July delivery), they would cut prices to a lower mark, than any of record in recent years. At a normal parity, spruce will be given preference, but it appears that yellow pine is supplied wherever it can be substituted.

An oasis in the lumber trade desert (as well as in all branches of industry) is the changed monetary conditions since the first of the year. Any worthy borrower can secure loans for his requirements at reduced rates. The continued hoarding of funds by bankers in anticipation of currency legislation is now having and will continue to exercise its beneficial effect. Low tonnage rates reflect but little benefit, in consequence of the scarcity of export orders. The English market is dead. Deals are selling at \$3 to \$4 off. River Plate business is very dull. The West Indies and African trade is below par. From the Pacific Coast comes the report that stocks in the Orient are ample.

In our opinion there will be a substantial increase in the volume of trade during 1914 as compared with 1913. During 1913 there was some increase in trade over the previous year, but prices were somewhat lower. Stocks are now about 50 per cent. greater than they were a year ago.—Columbia River Lumber Company, Golden, B.C.

Jas. D. Lacey and Company, whose Oregon office was formerly in suite 1107, Falding Building, have recently moved to suite 1313, Northwestern Bank Building, where they will have larger quarters in which to carry on their continually expanding business.

Sir Edmund Walker's View of Business Conditions

At the annual meeting of the Canadian Bank of Commerce, held at Toronto, Sir Edmund Walker, president, delivered an address, which, as usual contained a great deal of carefully thought out analysis of the financial and industrial situation in Canada. "A year ago," said Sir Edmund Walker, "the tide of expansion seemed still to be in flood, although in some quarters a check was either in plain sight or had here and there made itself felt. Money for certain purposes, notably in connection with real estate, was not so easy to obtain as in former years, yet little heed was apparently paid to the oft-repeated warnings of bankers and others who tried to forecast the future, although at the end of the year we must conclude that, after all, such warnings did have some beneficial effect. Clearly we have come through a time of difficulty in a most creditable manner, and we can look forward to the future cheerfully if the spirit of prudence which now characterizes our people remains unchanged at least until another good crop has been marketed. Much of that part of our expansion which went too far reminds one of the diseases through which the young have to pass. We are doubtless glad if they escape them entirely, but we have no reason to expect that they will be so fortunate. Some undue speculation in real estate, and some over-building in connection with public improvements, is inevitable amidst such astonishing growth and prosperity, and it would be foolish to expect anything else. We are now realizing more accurately the value of real estate, and through the process we are gaining an experience which is absolutely necessary to the foundations of a sound prosperity. The Western country as a whole will not again have to suffer from this particular ailment of young communities. We have repeatedly deplored the fettering of the country by the high rent-charge which inflated real estate values impose, and the unfortunate effect of such a rent-charge on the cost of living, and if there is now to be a pause in the upward movement of values there will in any event be a corresponding gain to all landless people.

"Immigration has not yet been much checked by the curtailment of industry, indeed, except from the United States, there has been a large increase during the year. The British immigrants exceed in number the combined total of those from Europe and Asia, and very much exceed those from the United States. The largest increase as compared with the figures of previous years, however, is in the division which includes all countries except Great Britain and the United States. Here the increase, December figures being estimated, is 32 per cent. From Great Britain the increase is 8 per cent., while from the United States there has been a decrease of 17 per cent. The total number of immigrants, December figures again being estimated, was 417,709, as compared with 395,804, the revised figures for 1912.

"In the six months of the current fiscal year ending September, the complete figures for which have been published, there is some improvement in the proportion of exports to imports, and since September a greater improvement has taken place. As to our exports we are glad to report an increase during this period in every group, while there has been a decrease in many of the classes of imports.

"It was evident to any student of the situation a year ago that Canada, and other borrowing countries, would be put to a severe test during 1913. What we were not prepared for was that this country should be singled out as, in some measure, chief among the sinners of this kind. It is well, however, to remember that when money becomes scarce in the great markets of the world, the chief borrower is always told he has obtained too large a share and that he must stop borrowing for the time being. We had scarcely realized that Canada had become the chief borrower, or practically so, and somewhat resented being held responsible for a situation created by the combined financial requirements of all the active mercantile nations of the world. However, we have had our warning, and shall doubtless act upon it.

"The fact remains that under all this pressure England has taken more of our securities this year than ever before. She has patiently remembered that we are obliged to finish the many sound and important enterprises, public, semi-public and private, which had been undertaken before the financial clouds began to gather. That such enterprises will command the money of the investor in preference to loans for the rehabilitation of foreign countries devastated by war, or in preference to securities based upon new ventures, we need not doubt, and out of the vast sum available each year in the markets of Europe for new investments we may be sure of getting a generous share. We shall have to face a keener analysis of the nature of the security offered and the necessity of paying higher rates to the investor, and we shall do well to abstain during the next year or so from seeking to market any unnecessary securities, in order that we may do what we can to restore the balance between the investment resources of the world and the securities offered for sale. It is pleasing in this connection to see that the higher rates of interest offered have opened the markets of the United States to our securities to an extent quite unusual in the past.

"Now that we have come to a slight pause in the growth of North

America, it is well to bear in mind some of the more important things accomplished during this period of expansion. In Canada, in addition to growth in many other directions, we have in sight the completion of two new transcontinental railway systems, and while they have been building the existing system has successfully established its claim to rank as one of the foremost railway systems in the world. As regards the United States, the Panama Canal is practically finished; a tariff adjustment, the mere thought of which would have created panic a few years ago, has taken place, leaving the outlook in this respect a certainty instead of an uncertainty; a Currency and Banking bill, for which the country has been waiting about twenty years, has been passed, and a more reasonable attitude has been adopted towards the question of railroad rate adjustment. These are all events of the greatest importance which must profoundly affect the future of the two countries and so far as Canada is concerned we may surely feel that we are now entering upon a new and more important phase of industrial life, for which our equipment is more adequate than ever before. No more positive evidence of the need and value of such equipment could be offered than the ease with which the present year's crop was harvested, moved, and warehoused. This has been done in a manner which would have seemed impossible only a few years ago, and the value of the smoothness and rapidity with which the work was handled can scarcely be estimated."

St. Agathe Company Enlarging its Operations

The St-Agathe Lumber and Construction Company, Limited, Ste-Agathe des Monts, P.Q., which was recently incorporated under federal charter with capital of \$300,000 has absorbed the businesses of the St-Agathe Saw Mill Company, of G. A. Chevalier, lumber manufacturer, and of J. A. Pare, sash and door and lumber manufacturer. The officers of the new company are:—L. E. Parent, president; J. B. Reid, vice-president; Ferd. Forget, director; Maxime Lanthier, director; Jos. A. Pare, director, and Ed. Parent, secretary-treasurer. The company are erecting a new factory for the production of lumber, doors, sash, mosaic and English flooring, maple flooring blocks and all small-wood wares in hardwoods and soft woods. The factory will be operated by electricity. The company will also erect a factory for the manufacture of cement products, such as building cement blocks, chimney cement blocks, cement culverts and water pipes for roads, etc. The company intend to undertake all kinds of public and private contract works, also to trade in real estate, etc. They are the owners of large properties in St-Agathe and of about eight miles of timber limits located near the mills which the company have acquired. The head office is at the former office of the St-Agathe Saw Mill Company.

The proposed new large plant of the company will be erected directly opposite the C. P. R. station at Ste-Agathe des Monts. At this plant small-size wood, generally left to waste in the bush, will be manufactured into various articles for sale. The president of the new company is the former manager of the St-Agathe Saw Mill Company Inc., which he organized in 1902. His energy and business ability enabled him to build up a large trade and the authorized capital of the company was not sufficient to take care of necessary enlargement of its operations. This led to the organization of the new company, with larger and fresh capital and increased business rights. Mr. L. E. Parent is a young man, 38 years of age, who has devoted all his time for the past sixteen years to the lumber business in the Laurentian Mountain districts. He has been mayor of Ste-Agathe des Monts for many years and has devoted a great deal of successful effort to the development of the town.

Good Outlook for Hardwood Trade

Editor Canada Lumberman:—

Buffalo, N.Y., Jan. 13th.

Trade in hardwoods in the Eastern States was quite satisfactory and at good prices, up to the latter part of the year 1913, when business began to drop off slowly, with every other kind of business in the States, and naturally along toward the 1st of January, people wish to take inventory, and stocks were run down as low as possible.

Hardwoods are beginning to move now, and we believe that by the middle of February or the first of March, we will see hardwoods moving in quite a normal way, and at fairly satisfactory prices.

We are unable to see a great surplus of any kind of hardwood in sight at this time.

The new currency bill which has recently become a law in the United States, will have a very beneficial effect on business and will give confidence to the business people, and bankers throughout the entire country.

The tariff bill is now settled, and people are beginning to settle down to business.

From our observations we think people are feeling encouraged and have confidence in the future. We believe the latter half of 1914 will see business in quite a satisfactory condition.—Buffalo Hardwood Lumber Company.

A Curious Yellow Pine Development

In the face of all the discussion which has occurred in Canada of late regarding the dumping of yellow pine upon the Canadian market, at prices far below the cost of production, Canadian lumbermen will be surprised to learn that the State of Missouri has recently succeeded in the proceedings brought against a number of yellow pine manufacturers carrying on business in that State, who were charged with forming a combination for the purpose of fixing the price of their products, lessening the freedom of competition, and, in other ways causing damage to the purchasing public of that state. The decision recently handed out in the case against the Arkansas Lumber Company et al., is a most remarkable one and is looked upon as establishing some very important legal precedents. Whether the decision will stand the test of appeals which are certain to be brought, remains to be seen. It is sufficiently alarming, however, to the lumber manufacturers concerned, and probably to other manufacturers in the State of Missouri, to learn that a great industry, which has of late years, been notorious for sacrificing its stocks in all markets, at prices below the cost of production, can be found guilty of conspiring to maintain prices illegally. If the situation were merely one involving a verdict and a possible fine, it might not be so very serious, but those who have been found guilty in this case are fined various large amounts ranging from \$1,000 to \$50,000, presumably according to the degree of guilt, and the decision involves also forfeiture of all their corporate rights, privileges and franchises in the State of Missouri. The decision concludes, however, with a recommendation that the ends of justice will be obtained in regard to most of the cases, if only the fines are paid and a stay of execution is granted in connection with the forfeiture of their privileges, franchises, etc., pending a further order of the court. In connection with five companies operating in the State of Missouri under licenses only, the recommendation is made that their licenses be cancelled and they are also to be fined various sums ranging from \$1,000 to \$50,000, with a similar recommendation regarding a stay of execution in connection with the forfeiture of licenses, thus leaving them subject only to the fine.

The total amount of the fines involved under this decision is \$436,000. Leading business men in Kansas City and St. Louis seem to be unanimous in the opinion that the situation is both absurd and critical. Unless the decision of the supreme court is amended or annulled at the rehearing, the result will be that several of the leading yellow pine lumber companies will have to move from the State and others will be obliged to pay very heavy fines. A demand is being made by business men for the annulment of the antitrust law under which the proceedings were instituted, as they do not look with approval upon the prospect of the removal from the State of so many important business interests. It is calculated that the yellow pine companies' business alone means to Kansas City, 2,500,000,000 feet or in value \$40,000,000, and the employment of several hundred persons.

Not the least interesting peculiarity of the situation is the fact that it involves such men as Captain J. B. White, Mr. R. A. Long and others in the lumber business, whose reputations as men of the highest business and moral type are national, and regarding whom everyone knows that they would not have violated any law, antitrust or other, had they understood its meaning. It appears like an irony of business fate that these men who have done so much to build up the industrial prominence of their State and who have suffered so much on account of the uncertainty arising out of business depression, should be found guilty on such a charge. In their eyes the greatest "restraint of trade" is the doubt under which they have labored as to the meaning of the law in business, growing out of the widespread movement in the direction of prosecution of business corporations.

Canadians are not in a position to take sides one way or another in a matter of this nature, but they will certainly be surprised to learn that the prices of yellow pine in any market have been maintained by the manufacturers in such a way as to render them guilty of a charge of "restraint of trade." So far as Canadians can see, the boot is probably on the other foot.

New Brunswick Lumber Industry Expanding

The importance of the lumber industry to St. John and the province of New Brunswick generally is shown by the extent of the exports for the year 1913. While there has been some falling off in the quantity of lumber cut during the last few years, it has been due to market conditions instead of to any falling off in the available sources of supply. Spruce is still king, but some pine is cut, as well as hemlock and cedar, and a considerable quantity of hardwood. The new Transcontinental Railway, and the Intercolonial Railway which runs across the northern part of the province, have opened up very valuable sections of hardwood timber, including birch, maple and beech. There are fine opportunities along the new railways for the establishment of industries requiring hardwood as their raw material. The total exports of lumber from New Brunswick to trans-Atlantic ports last year was 270,000,000 feet, of which over 86,500,000 feet was shipped from

the port of St. John. There were also large shipments to the United States, some by water and some by rail. The shipments from St. John to the American market for the year were valued at \$1,527,000. The quantity of pulp shipped from St. John to that market for the year was valued at over \$328,000, and the pulpwood at over \$83,000. There is a growing trade in New Brunswick lumber with the Montreal district and eastern Ontario, and during last year, when other markets were dull, this was an important branch of the trade in the northern section of the province. One of the very important industrial developments of New Brunswick in coming years will be the establishment of factories to utilize lumber which is now shipped in such large quantities in the rough state to outside markets, there to be manufactured into articles of use.

B. C.'s Forest Development

Mr. H. R. MacMillan, chief forester for British Columbia, speaking of the forest revenue of the province, in a recent interview, said that the receipts for 1913 were the largest ever received in a single year by any province of Canada. The total was nearly \$3,000,000 or approximately \$27 for each inhabitant. British Columbia is the only province in Canada, he said, which is not over-cutting her forests. I believe that the forest revenue will increase largely from year to year as the markets for our timber develop and the logging operations which are now merely on the fringe of the forests are expanded, until our annual cut keeps pace with the normal forest growth. The estimates of an even greater revenue in the future are based upon surveys of timber wealth of the province which have been continued during the year by the forest branch. These surveys have shown that our timber wealth is by no means confined to the coast district and the southern interior, but that in the northern interior, which is now being opened by new railroads, there are large areas of timber of a better average quality than is to be found in the stands that constitute the chief forest resources of Ontario and Quebec.

The forests of this province, if protected from fire, will, I am confident, form the basis of a future industry of such magnitude that the most optimistic cannot grasp its possibilities to-day, possibilities which will assuredly develop under the creation of new markets on the northern prairies and in northern British Columbia. Negotiations are now under way which will lead to an increase in revenue from timber royalties. A marked advance was made during the year in protecting the forests of the province from fire. The sources of fire danger were carefully studied, and arrangements were made before the fire season opened to provide an adequate patrol to control possible outbreaks. As a result of this policy the province had a record season so far as the minimum fire damage in its forests is concerned. Of the 600 fires which occurred during the season, seventy-two per cent. were extinguished by patrolmen. The cost of extinguishing those fires which got beyond control of the fire patrols was only \$9,000, as compared with \$30,000 for the previous year, which itself set a low record for many years.

The great wealth of our forests requires that even greater fire precautions must be taken in the coming years to prevent destruction by fires arising from increased settlement and railroad construction. In order to improve facilities for fire protection, and to render the fire patrol service more effective, 1,200 miles of trails and 360 miles of telephone lines were built by the forest rangers and forest guards during the past season. The value of these improvements will be an even increasing asset in the coming years.

The value of the forest products of British Columbia for 1913 exceeded that of all previous years, amounting to approximately \$30,000,000. For the first time in the history of British Columbia the timber industry has ranked with the production of minerals as the chief wealth-producer in the province. The annual value of forest products of British Columbia exceeds that of all other provinces in the Dominion, with the exception of Ontario. In its importance to the people of the province the lumber industry has, during 1913, passed all its competitors. The 794 logging operations and 350 lumber and shingle mills employ over 50 per cent. of the total number of wage earners employed in the industries of British Columbia.

Lower Rates to Canada

The Soo Line and Canadian Pacific have published, effective February 1, substantial reductions in rates on hardwood lumber in carload lots to points in Western Canada, known as "trade centers," from Minneapolis and St. Paul and Minnesota Transfer. These are basing points for making through rates to Western Canada points. As an illustration, the present rate from basing points shown to Winnipeg and St. Boniface, Man., is 20 cents per 100 pounds, while the new rate will be 17 cents. To Portage la Prairie, Man., present rate 22 cents, will be 17½ cents. To Regina, Sask., present rate 35 cents, will be 31 cents. To Saskatoon, Sask., present rate, 43 cents, will be 37 cents. To Moose Jaw, Sask., present rate 39 cents, will be 33½ cents. To Calgary, Alta., and Edmonton, Alta., present rate, 54 cents, will be 44 cents.

The Proper Use of Belts

Much useful information in regard to the use of belts is contained in a handy belting manual issued by the Graton & Knight Manufacturing Company, Worcester, Mass. Referring to the tightness of a belt the manual says:—The tightness with which the belts are put on the pulleys is of fundamental importance. If too tight there is a large unnecessary loss of power from excessive friction at the bearings, to say nothing of the fact that the leather is over-strained and injured. On the other hand, if too loose, the belt is liable to flop around and jump from the pulleys, particularly when working where a load is suddenly thrown on or off. When the belts are put on and taken up under the direction of one man, the errors of too tight and too slack belting are avoided and a uniformity of belt tension exists throughout the factory which can be obtained in no other way. Of course, it is evident that the slacker a belt can be run, up to a certain point, and do its work satisfactorily, the greater the economy will be. In installing belting and taking it up, consideration must be given to the fact that certain kinds of belting are affected by weather conditions, lengthening and shortening according to the amount of moisture in the air. This is particularly true of certain makes of chrome leather belting, and instances have been known where babbitt has been melted out of boxes, or even shafting has been pulled down, as a result of such belting having been put on too tight.

Shafting in Line

On the subject of shafting the manual says:—Be sure to note carefully whether your shafting is properly in line. Probably more belting is ruined by improperly lined shafting and pulleys than in any other way. The belts, under this condition, are either kept on the pulleys by guides or rub against hangers or portions of machines until a lap is started open, thus catching the belt and tearing it or stretching it excessively on one edge. Belts so stretched will not run straight and are apt to run off the pulleys and become torn.

Remember that, because shafting was once in line, it does not follow that it stays so indefinitely.

Changing loads on the floor is apt to put shafting out of line. Frequent inspection of shafting for alignment is always rewarded by a large saving in the friction load.

In all replacements, as well as in the original installment, initial economy should not be the only thought. It is a very simple matter to connect two pulleys by a band in such a way that when one pulley is turned the other will go round. It is not at all a simple matter to proportion a drive properly and to select the size and quality of belting which will transmit power most efficiently and economically. Yet the problem seems so simple that it more frequently than not fails to receive the necessary consideration, and a common result is that belting is condemned when really the man should be condemned who asks the belt to work under given conditions. Most belt troubles would never appear if the design and installation of the belt equipment were placed in competent hands. It may be stated as a general rule that the use of the best quality belting, of weight and pliability adapted to the work required, will pay good dividends in lessened repairs, increased life of belting and increased output of machines. The usual tendency is to employ a single belt, which is too light, and a double belt, which is too heavy for the work required.

To Secure the Best Results

Single belts should be put on so as to run with the grain, or hair side, next to the pulleys, and so the points of the laps will run against the pulleys, as the laps on the outside of a belt are most liable to come apart when the points are run against the atmospheric pressure.

Double belts should be put on so that the points of the laps will run with the pulleys, as both sides point in the same direction.

For quarter-turn belts the details of the drive must be analyzed. The belts must be specially constructed to give satisfactory service. A quarter-turn drive without an idler requires a differently constructed belt from one with an idler.

For quarter-turn drive without idler, the pulleys must be set so that the point where the belt leaves the upper or driving pulley and the point where the belt leaves the lower or driven pulley must be in a plumb line. In this arrangement the belt can be run in only one direction. Any attempt to drive the belt in the reverse direction will result in its being thrown from the pulleys and probably ruined.

On quarter-turn belts specially constructed for drive without idler, one edge is marked as follows:—"Run this edge on long side of the drive." This edge must run on the longer side of the drive to give satisfactory results.

Location of Shafts from Pulleys

Care should be exercised in locating shafts so that they are not too near together; there should be distance enough between them to allow the belt to recover somewhat from the strain applied on the

tight or working side. This distance depends entirely upon the size of the belts and pulleys, but should be sufficient to allow some slight sag to the slack side of the belt. It is also injurious if the shafts are too far apart, for, in such cases, the weight of the belt draws heavily upon the shafting and increases the friction load in the bearings. At the same time it causes the belt to swing from side to side, frequently to such an extent that it nearly runs off the pulleys. This constant swinging from side to side is also a frequent cause of crooked spots developing in belting. If possible, the shafting and machinery should be so installed that the tight side of the belt is at the bottom, so that whatever sag there may be in the belt will tend to increase the arc of contact on the pulleys.

It is the best and most economical practice to use pulleys of large diameter, thus obtaining a high belt speed, which means a saving both in the transmission of power and the wear and tear of the equipment.

The speed of the belt being the same, the diameter of the pulley has a slight effect on the amount of power transmitted, the difference being in favor of pulleys of large diameter.

The speed of the shaft being the same, the advantage in favor of large pulleys over small pulleys is in proportion to their diameters.

Covering pulleys with leather reduces the slipping of belts and also decreases the friction losses in belt driven transmission by making it unnecessary to run the belts so tight. It is estimated that leather covered pulleys will enable belting to transmit thirty per cent. more power than pulleys with the plain iron surface.

How to Cover Pulleys with Leather

Be certain that the pulley is absolutely free from grease by washing it with naphtha, gasoline or some similar material. Be sure that the pulley is reasonably warm and dry. Where possible, make the cover endless, about one-eighth of an inch to the foot shorter than the circumference of the pulley. Place the endless cover on the pulley, pushing it on, say one inch or more, then thoroughly glue the exposed inside surface of the cover and the exposed outside surface of the pulley, being sure that the glue is very hot, but not boiling, and not too thick; rub the cement thoroughly into the leather and also onto the pulley. As soon as you have these surfaces glued take the pulley by the spokes and drive the cover on by striking it on the floor bench. Do this as quickly as possible, but carefully, for if you strike too hard it will bend the leather so that it will be impossible to drive it on. If it sticks a little, use a screw driver between the cover and the pulley and force it down, using the screw driver as a lever.

As soon as the cover is completely on, thoroughly rub the edges of the cover with a round hickory stick, or handle of some kind, so as to make a good contact between it and the edge of the pulley. This serves to work out the air and surplus glue.

An experienced man can cover a pulley in this manner so tight that it will not need rivets, although it is customary as a matter of safety to use a few copper rivets.

Let the pulley set two or three hours before using.

We have tried to offer a few suggestions for the proper care of belting, and we may summarize these briefly as follows:—

Place the belting in charge of one man.

See that he knows his business and attends to it.

Have all belting periodically inspected.

Remedy all faults in their early stage.

Keep all driving surfaces clean.

Put grease into too dry belting.

Take grease out of too oily belting.

Avoid sticky dressings.

Run all belting at as nearly as practicable a uniform tension.

Run belts as slack as they will work efficiently.

Keep all shafting rigidly in line.

Compensation Proposed for River Drivers

In the Quebec Legislature, Mr. Cannon, member for Dorchester, recently proposed the extension of the Compensation Act to men in lumber camps and those employed in floating logs down rivers. By judicial decisions these men are now outside the act. Mr. Tellier, leader of the opposition, thought that when a man took the risk of his life, even for a small jobber in the employ of a farmer, and was injured, his family should be recompensed for the loss, temporary or total, of the bread-winner. It was true that this kind of logging would not come under the head of commercial accidents, but when an accident occurred the loss was just as great in a big as in a small company. The Minister of Public Works said that the suggestion of Mr. Tellier was too far-reaching, as if adopted, any farmer having engaged a couple of men for cutting down trees, in the event of an accident would become responsible for damages. Mr. Tellier believed that no restriction on the kind of employer should be made.

The Reader's Viewpoint on Trade Topics

Opinions on Questions of General Interest—How to Replace a Pulley Key—
Saws That Are Too Thin

Removing and Replacing a Pulley Key

Editor Canada Lumberman:

I intended sending you a short contribution regarding my experience in the application of power to mill machinery, but owing to another subject that attracted my notice, I leave it over for a future writing.

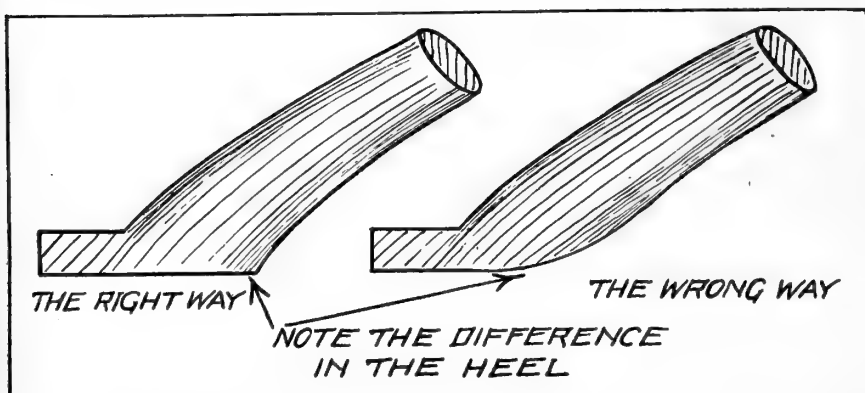
A recent number of a machinery journal contains an article in which is handed out—free of charge—a method of removing keys, and fitting keys to pulleys on shafts.

It must be evident to any mechanic who has read the article, that the writer could not be entrusted with the performance of the operation he undertakes to explain.

The removal of a key from an iron pulley fastened to a shaft, or adjusting a key in a pulley—or any other wheel—is an operation so familiar to machine men and mill men in general, that the subject is seldom, or never, treated in print, and I should not have taken up the subject, were it not for the feeling that the article referred to might mislead younger men of less experience.

The adjusting, or fitting of keys for holding pulleys, couplings, etc., to their proper positions, is very rarely done at the mill. This work is, with a few exceptions, finished at the shop, but it sometimes occurs that an old pulley must be placed on a new shaft or vice-versa, in which case it is up to the millwright to do the work, or have it done by a competent man.

For our present purpose let us assume that there is a key, that requires readjusting, in a pulley on the main shaft of the mill. It was noticed last fall just before the mill shut down, and although it was driven with a sledge, yet there is a doubt as to its security and it may



play a trick next summer. To readjust it properly it is absolutely necessary that the key be taken out for examination, and this is where experience counts.

The man assigned to do the work may not have had an apprenticeship in the machine shop; nor be much of a mechanic, but he knows something of the work he has in hand, and can be entrusted with it.

Our man will make a good stout drift or have one forged by the blacksmith. This will exactly fit the point, or small end, of the key and is drawn out for about 1½ in. in length. The full length of the drift may be about 8 in., and it will be made of 1 in. octagon or round cast steel. I enclose a sketch of the drift to illustrate my idea more plainly.

Next a 12-pound sledge is secured and a pair of tongs to hold the drift and a man to hold the tongs. To take a position to give a good blow with the sledge, is the next step—not a swinging blow. The striker strikes a couple of light blows—aims as it were—and then lets go a good solid drive. He knows by the sound that the key did not budge. The same operation is repeated three or four, or perhaps twenty times, but the man does not mind. He has been at this before. At last the sound changes. The key has started back and our man heaves a sigh of satisfaction. The rest is easy. The key is driven back as far as the drift will send it. A follower is brought into requisition, and the key is driven out.

But why did the key work loose? It was a bad fit, it was bearing hard at the big end and not touching at the small end. This is why it would not hold.

A key should always bear hard at the small end if it is to be held secure.

The question of refitting the same key or making a new one comes next. This is soon decided upon. It may be easier to forge a new key

than try refitting the old one, in which case a pattern is made to fit exactly in the key seat, the blacksmith forges a key of the dimensions of the pattern, leaving just a little over for filing—for there is no iron planer within a hundred miles. The operation takes a little time, but this is expected under present conditions, and there is no complaint. We will buy an old planer and perhaps a lathe next year.—W. Marsh.

Charges Bank Interest After Due Date

D. M. Heise, retail lumber dealer, Stouffville, Ont., when in Toronto recently, visited the Canada Lumberman and reported a good outlook for business next spring. Mr. Heise, by progressive business methods, managed to secure a satisfactory amount of business even during the recent dull months. Side-lines such as patent roofing, cement, etc., had much to do with this, as Mr. Heise believes in stocking as wide a variety of materials as possible, so that the customer who is doing some building can buy nearly everything he requires at the one place. He does not push the side-lines to the same extent as the lumber, but if a man has his mind made up to buy a patent roofing or some other such material instead of using wood, Mr. Heise believes in being the man to sell it.

Following up collections closely, going out systematically after new business and being as useful as possible to customers, are some of the other factors in Mr. Heise's success. Some time ago he decided to adopt the practice of charging bank interest on accounts, after the due date. It took some time to educate the customers, but in the end, all the really desirable customers fell in with the plan and it is now working well, as accounts are paid up promptly in nearly every case. There are occasions, of course, when the rule is not followed so strictly. In the winter for instance, when the sleighing is good, and a farmer's teams are not so busy as in the spring, Mr. Heise allows farmers to make purchases and draw away the stock, but does not count the sale as being made until about the time the farmer would be requiring the stock in the spring. The bank rate of interest is not charged until a month after the opening of spring. This is a reasonable arrangement, as it enables the dealer to move his stock out steadily. It simply amounts to this, that the farmer stores the stock during the winter months and the dealer is sure of his sale. He is also sure of keeping the farmer's trade, as a result of having extended so useful a privilege.

A Good Outlook for Trade at Belleville

Editor Canada Lumberman: Belleville, Ont., February 5th.

Building is very nearly at a standstill, and has been since the end of the year. The yards have about the average stocks on hand, and everybody seems optimistic about what spring will bring. There will be a good deal of government work here, new docks, new fish hatcheries, and the completion of the dormitories at the school for the deaf. There will be the railway construction and the station buildings in connection therewith. So, with the usual building trade, and a good farming community always requiring materials, prospects never looked much better.

A drawback to all business is poor collections. This has been our experience during 1913 and there is little change as yet. Local establishments are carrying more paper under discount than a year ago, a great deal of the paper being about a year old.

Summing up conditions. We would say that the year 1914 seems to be opening up with brightest prospects for the trade generally. There is every indication of a bigger and better year.—The Holton Lumber Company, Limited.

Accuracy in Timber Estimating

Editor Canada Lumberman: Old Town, Maine, January 9th.

I feel that somewhat of an apology is due you for infringing on your space to the extent I have in getting Mr. R. Sweezy to acknowledge that the term "absolute accuracy" as used in an advertisement of that company, in reality meant "relative accuracy," but as Mr. Sweezy thoroughly so explains his inadvertent phrase in your issue of the 1st inst., possibly the space used will not be unprofitable to readers, nor to Mr. Sweezy.

I do not wish to take up your space further by a detailed discussion of methods of estimating. These vary with conditions and requirements. Sometimes with certain species calipers are used; at other times not. Hard and fast methods cannot be insisted on, but must be varied as experience and wished for results command. The

other questions Mr. Swezey asks may best be answered by reference to various text books and pamphlets, especially to Mr. Graves' "Forest Mensuration," and to Mr. Cary's "Manual for Northern Woodsmen." I do not think it necessary to encumber your columns with any further answers.

I will state, however, that the use of height classes and diameters form a satisfactory method of doing work in certain species; that the usual way of arriving at heights is to obtain an average height for each diameter by observation and measurement of a sufficient number of trees to warrant that average. The mechanical part of measurement is done very simply, instrumentally, and I refer Mr. Swezey to the text books above mentioned for information, or will be glad to write to him personally explaining the method if he wishes.

I will, however, take exception to one statement in Mr. Swezey's letter of the 16th, viz., that I have suggested methods in timber cruising during this correspondence. I have not intentionally so done, as it seems to me far better to remain on the point at issue which in this case was the impossibility of absolutely accurate timber estimates at a cost of 1 cent to 4 cents per acre.—James W. Sewall.

Editors note:—The above reply by Mr. Sewall to Mr. Swezey, seems to bring this interesting correspondence to a mutually satisfactory conclusion. Mr. Sewall's letter contained further material of a contentious nature, which he kindly left at our discretion to publish or omit. The question has been well discussed already, however, and we hope that it has been of interest and value to our readers as well as to the writers.

The Use of Saws That Are Too Thin

Editor Canada Lumberman: Westboro, Ont., Feb. 2nd.

Referring to the use of saws used by the lumbermen in our country, I am firmly convinced that many of them are wasting lumber, by striving to operate saws to thin. We will take a 14 gauge saw, which is by rule measure, 1-12 in. thick, or 2-24 in. thick, and give it 1-16 in. set, by spreading the teeth to that width. The whole width being three and one-half twenty-fourths inches, of a kerf. If a band saw and carriage is used, the boards cut would require to be set out to $1\frac{1}{8}$ in., if to be dressed to 1 in. thick. This thickness of $1\frac{1}{8}$ in. becomes necessary as the variations of the saw along with the lost motion of the different parts of the complicated machinery, required in the construction of the carriage, make it absolutely necessary, for we may note, that $\frac{1}{8}$ in. variation in a band saw, either into the log or out of it, is not at all unusual. Ask any good sawyer. And what makes matters worse, is the fact that band saws so often score the lumber, if the plate and teeth of the saws are not in perfect order, or alignment.

We will now leave the band taking three and one-half twenty-fourths, for one board, and take a saw 11 gauge thick, which is by rule measurement, $\frac{1}{8}$ in. thick, or 3-24 in. thick. And spread the points of the teeth 1-16 in. or $1\frac{1}{2}$ twenty-fourths of an inch, making four and one-half twenty-fourths, or 1-24 in. thicker than the 14 gauge saw. But by a better design of a machine, along with the thicker saw, we are in a position to cut the boards 1-16 in. thick. We save the difference between 1-24 in. and 1-16 in. by the use of the thicker saw, and make the lumber all merchantable. Some might say that the saving is not worth mentioning. But we fail to see the advantage of trying to save lumber in the saw mill, and planing it off in the planing mill, or making planer chips instead of saw dust. And there must be a saving in freight when the boards are shipped rough, as nearly 1000 feet more can be loaded on a car. In the above I do not wish to be understood as condemning the band saw and carriage, for all purposes; far from it. I believe it to be the best for cutting defective, and large logs, if properly operated, but for small sound, and knotty rough logs, I have no hesitation in saying, the thicker saw is very much the best.—I. N. Kendall.

A Cash Business the Right One

Editor Canada Lumberman: Bowmanville, Ont., Feb. 7th.

It is rather early yet to make any kind of accurate report, or even estimate, on trade conditions for the coming season, but, as far as we can judge at present, there is not likely to be any considerable amount of building in the town. However, we have had a few inquiries from farmers and we hope to do our usual amount of trade with them.

With reference to collections, we are finding this the most difficult part of our business to handle, and are being more firmly convinced every day that a cash basis is the only satisfactory one upon which to do anything like a profitable business.

"Small profits and quick returns," is not only a good maxim but an excellent business proposition as well.—McClellan & Company, Limited.

A Fair Trade Expected at Newmarket

Editor Canada Lumberman: Newmarket, Ont., Feb. 7th.

I cannot see how the building trade this year can equal that of the past year. In my observation I find that most towns and villages have a few vacant houses, and factories in general are running either with a reduced number of men or on short time, which is not a bright

outlook for speculative builders who look for a ready sale. I also find that some men are leaving town and going back to the farms. All these conditions combined make me of the opinion that trade will only be fair for the coming summer. The outlook for the building trade in our town and district, seems very favorable for this year, and we are figuring on a good season's business.—W. H. Eves.

Healthier Business at Hamilton

Editor Canada Lumberman: Hamilton, Ont., Feb. 5th.

It is a little difficult to make any accurate business forecast at present as this has been a most unusual year so far. However, present indications seem all to point to a renewed activity in building operations in the early spring, or as soon as the weather will permit. Business is still a little dull, as the market has not yet recovered its former confidence. The situation on the whole is decidedly optimistic, and, if trade is not quite up to the early spring of 1913, it will undoubtedly be of a more healthy nature.—The Consumers Lumber Company, Limited.

Prospects are Good at Hamilton

Editor Canada Lumberman: Hamilton, Ont., February 5th.

Business is very quiet at present in the building trade. Most of the yards and mills are on short time and short-handed.

There is every prospect, however, that we will have a good season's business, as the architects report that they are getting busy on plans for new buildings which are contemplated.

Stocks on hand are about average size for this time of the year and collections are nearly up to, if not as good as, last year.—D. Aitchison & Company.

Collections Fairly Well Met

Editor Canada Lumberman: Almonte, Ont., Feb. 5.

The outlook for trade is scarcely up to the average. It is better in the town, but not so good in the neighboring country. Collections are fairly well met. Stocks are below the average in yards and local mills, aside from those on the Ottawa River.

So far as any reasonable estimate can be made, the outlook here is less promising than it was a year ago. However, the actual conditions will be better known with the opening of spring.—W. N. Acton.

Collections Fair but Past Due Accounts Still Evident

Editor Canada Lumberman: Brantford, Ont., Feb. 7th.

We have just as large a stock on hand as we had a year ago. Collections are fairly good, though we are carrying some past due accounts. Building prospects in this locality are not so good, though there will be a large quantity of the smaller classes of buildings.—The Schultz Bros. Company, Limited.

Expecting Trade to be Active and Good

Editor Canada Lumberman: Burlington, Ont., Feb. 6th.

We expect business this year in the retail trade to be as good as the early part of last year. Everything seems to indicate that the crisis is past and that the retail business is back to normal. Our January sales exceed January of a year ago by about 25 per cent.—A. S. Nicholson & Company.

Trade Prospect Paragraphs from Our Readers

The general outlook for the lumber trade during 1914 is that it will experience a good steady business. Profits were about the same during 1913 as during 1912, but the price of lumber was \$1.11 greater than in the previous year. We find stocks larger now than a year ago.—The Saskatchewan Lumber Company, Limited, Crooked River, Sask.

Trade conditions are steady, but we look for nothing in the nature of a boom during 1914.—C. Beck Mfg. Company, Limited, Penetanguishene, Ont.

Lumber prices during 1913 were better than during 1912, but the costs of operations were also greater.—Highland Lumber Company, Berriedale, Ont.

The outlook for trade during 1914 looks better than during the greater part of 1913.—Kent-Cooper Company, Limited, Collingwood, Ont.

The outlook for trade during 1914 is good and will be still better if the money market opens up.—George Tennant, Bracebridge, Ont.

Trade conditions are slow at present, but we think they will be alright before long.—J. W. & J. Anderson, Burnt Church, N.B.

We consider that the outlook for trade during 1914 is very bright.—J. D. Shier Lumber Company, Limited, Bracebridge, Ont.

We consider the outlook for trade during 1914 to be fairly good.—Petawawa Lumber Company, Pembroke, Ont.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Simonds Canada Company Enlarging its Factory

Foundations have already been completed for a large new building for the Simonds Canada Saw Company, Limited, at their plant, St. Remi Street and Acorn Avenue, Montreal, Que. The building will be of substantial brick construction, 170 feet long and three storeys high, and it is expected that it will be completed early in the summer. The growth of the business of Simonds Saws in Canada has been so regular and continuous that their present factory equipment in Montreal is working to full capacity. A new building will be necessary to take care of the increases during the next few years if the business continues to grow as rapidly as it has in the past few years.

A. R. Clarke & Co., Ltd., Have Nineteen Men on the Road

Nineteen experienced and well-known travellers will represent A. R. Clarke & Company, Limited, on the road this spring. Each traveller will have a full line of Clarke's well-known cold weather clothing, sheepskin-lined coats, mackinaw coats and pants, and ladies' fancy check mackinaw coats in a variety of patterns, and thoroughly up-to-date in cut and style. The lines of gloves, mitts, gauntlets and moccasins are well-known to the trade, but the company's past experience has enabled them to make many improvements upon what they offered last year, such as, the smelters mitts with wire sewn seam, gloves with double sewn finger tips, and many other useful improvements. The leather which enters into the manufacture of these goods is all manufactured in the company's tannery and has been improved until they claim that it is the best leather manufactured.

many new styles. All their shirts

In shirts, the company shows are double stitched and the buttons sewn on extra tight. Their new model lumbermen's shirt has met with much success. It is a general favorite in the lumber business.

Mr. T. H. Alice, of the company's Vancouver office, who has been with them for many years and is well-known to the merchants of British Columbia, will again represent the company. He will be assisted by his son, Mr. H. B. Alice, who promises to make as much of a success as his father.

Mr. R. M. Carey, of Edmonton, will again represent the company in Alberta. He is expecting a banner year.

Messrs. Thompson & Henselwood and their three assistants, of Saskatoon and Regina, will be going over the same route and visiting old friends this year in Saskatchewan.

Mr. J. McClure, of Winnipeg, is looking for splendid business with the merchants of Manitoba.

Mr. C. J. Pattinson, or "Pat" as he is known to every one in the trade, has a larger territory this year than ever. He will cover southern Manitoba and Western Ontario.

Mr. W. J. Gaynor, a newcomer with the company, has excellent recommendations and the company feel sure that their customers in northwest Ontario will give him a welcome.

Mr. D. D. Rose, the company's oldest and most respected traveller, will cover Northern Ontario again and is looking for larger business than ever.

Mr. Theo. Trickey, will call on the trade of eastern Ontario. Though only with the company for two seasons he has made an excellent record and is expecting to show a decided increase this year, as he did last year over the year preceding.

Messrs. Mackenzie & Stuart, who will call on the Ottawa Valley trade, are new to the company, but are counted upon for good results.

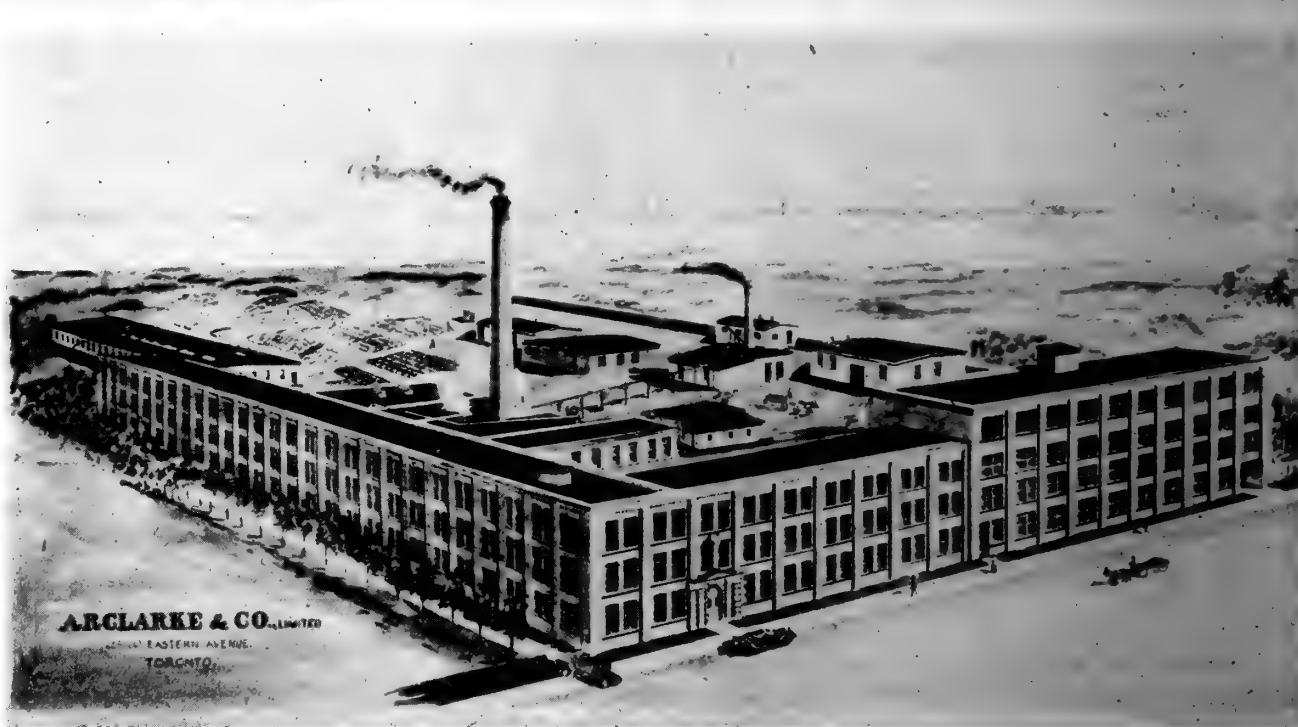
Messrs. E. N. Lavellee, of Montreal, and C. Morin, of Quebec, will represent the company in the ancient province.

Mr. Geo. D. Travis, is the company's farthest West traveller. He is known from one end of the Yukon to the other.

Messrs. W. N. Yetman and T. H. Kitchen, of Sydney, are the representatives in the Maritime Provinces. They have made a record as among the most capable and courteous men upon the road.

For Shifting Heavy Materials

Some very interesting recent installations of Morris Overhead Runways, are dealt with in Bulletin A-12 issued by The Herbert Morris Crane & Hoist Company, Limited, Empress Works, Peter Street, Toronto. Reproductions of photographs of these runways



Plant of A. R. Clarke & Co., Limited, Toronto

bear testimony to the flexibility and handiness of the system employed. The Morris Runway is shown in the warehouse, paper mill and foundry and the modifications of the equipment to suit varying conditions is shown in a very interesting way.

An Important New Swage

Mr. F. A. Breeze, one of the firm of Breeze, Denison & Company, Newburgh, Ont., has patented a swage which will roll out seven gauges of steel at one pull of the swage, the pressure being made with steel rollers that put a perfect point on the corner of a saw tooth with half the labor or less, that is necessary where a solid die scrapes out the steel to form the tooth point. Mr. F. A. Breeze is the sole inventor of the patent steel roller bearing carriage and patent steel band mill that has attracted so much attention of late.

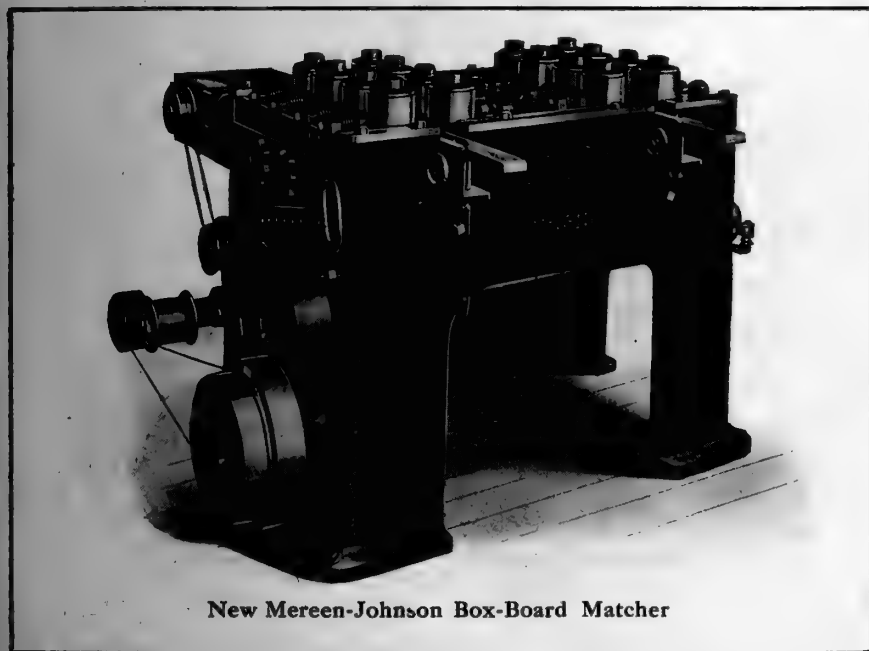
A Valuable Remedy for Horses

A valuable remedy for use in stables, which has been increasing in popularity from year to year, is Absorbine. Leading trainers and horsemen are among the steadiest users of this well-known liniment. When a horse is cut or wounded, the owner naturally wants something which will heal the sore from the bottom. Absorbine, being a germicide and antiseptic of well-known merit, penetrates into the wound, kills the germ and promotes a rapid healing process. Owners of horses which are suffering from a wire cut, fistula, poll evil, or any burrowing sore should write to the manufacturers of Absorbine, W. F. Young, P.D.F., 424 Lyman's Building, Montreal, who will furnish valuable advice regarding the treatment of any individual case. Absorbine is sold at \$2 a bottle at druggists or send direct, charges prepaid, upon receipt of price.

A New Box Board Matcher

The accompanying illustration represents a front view of a new box board matcher which has recently been placed upon the market by the Mereen-Johnson Machine Company, Minneapolis, Minn., U.S.A. These machines have been given operating tests for approximately three months, so that the company is placing them upon the market with every confidence in their capacity. They claim that the only practical limit to the amount of short lumber this machine will tongue and groove is the ability of the operator to feed in the stock. The matcher is ordinarily furnished with cone pulleys, giving a rate of feed of 85 feet per minute, or 140 feet per minute. It is equipped with eight pairs of driven feed rolls, two pairs in front of each cutter and two pairs behind. The rolls are 4 inches in diameter. The first and second pairs are $4\frac{1}{4}$ inches between centres. The second and third over the cutters are $5\frac{1}{2}$ inches between centres, and third and fourth are $4\frac{1}{4}$ inches between centres, making a total distance of only 14 inches from first to last roll, which gives the best possible support to short or warped stock. Each feed roll can be adjusted independent of all others, so that an operator with little experience can keep them in alignment. The equipment includes one pair of patent cutters which do smooth work on knotty or cross grained lumber. The sawdust is conveyed to the rear of the matcher through cast iron pipes feeding closely under the cutters. The company will also furnish, when ordered, a gluing device, with an adjustable glue wheel, which can be kept in line with the cutters until they are worn out. This device is ordinarily tapped for steam connections. A similar device, fitted for electric current, can also be supplied by the company.

The countershaft is directly connected to the frame. The T. & L. pulleys 8-in. x 5-in., are designed to run 890 revolutions per min-



New Mereen-Johnson Box-Board Matcher

ute. The machine requires 5 h.p., has a shipping weight of 2,200 pounds and occupies a floor space of 3 ft. 6 in. x 5 ft. 3 in.

The address of the Mereen-Johnson Machine Company is 44th Ave. N. and Lyndale, Minneapolis, Minnesota, U.S.A.

National Wholesalers Will Have Good Meeting

Arrangements for the twenty-second annual meeting of the National Wholesale Lumber Dealers' Association to be held in Buffalo N.Y., at the Iroquois Hotel, on March 4th and 5th, are progressing and the indications are that there will be a very large meeting. Replies from invitations to the various trade organizations show that the representation will be general, not only from the wholesale and retail associations, but also from the National Conservation Association, American Forestry Association and the Railway Business Association and others. The annual banquet of the association will be held at the Iroquois Hotel on Thursday evening, March 5th at 7 o'clock.

Increasing Imports from United States

Canada's imports of lumber free of duty from the United States under the heading of "sawed or split boards, planks, deals and other lumber not further manufactured than dressed on one side only" during the year 1913 totalled 382,774,000 feet B.M., valued at \$6,087,560. Compared with 1912 this was an increase of about 4,500,000 feet in quantity and \$1,102,823 in value. Compared with previous years these imports show a remarkable increase. In 1911 the total quantity was 193,177,000 feet; in 1910, 84,666,000 feet, and in 1909, 50,811,000

feet. The imports for 1913 under this head were therefore more than seven and one-half times as great as during 1909.

Imports of pitch pine during 1913 free of duty amounted to 118,868,000 feet, valued at \$2,435,376. These imports also show remarkable increases. The total quantities for previous years being as follows:—1912, 91,441,000 feet; 1911, 94,048,000 feet; 1910, 42,341,000 feet; 1909, 42,317,000 feet.

Imports of wood pulp during 1913 and previous years were as follows:—1913, \$2,713,226; 1912, \$1,858,831; 1911, \$1,470,638; 1910, \$1,052,400; 1909, \$770,412. The total value of imports of wood and manufactures of wood free of duty from the United States during 1913 was \$19,184,547, an increase of nearly \$5,000,000 as compared with 1912 when the total value was \$14,398,289 and over three times as great as the value under the same heading for 1909, which was \$6,147,249. Dutiable imports of wood and manufactures of wood from the United States during 1913 were valued at \$8,175,008 as compared with \$5,315,493 during the corresponding period of 1912.

Personal and Trade News

The late Hon. John Sharples, of Quebec, left an estate valued at \$779,456. Aside from a number of legacies, which total about \$79,000, the rest of the estate goes to his wife.

The Long Lumber Company, Hamilton, Ont., have sent out to the trade as a souvenir a very striking colored picture of a bull dog's head, mounted upon a large brown board.

Mr. F. Haimberger, VIII Langegasse 63, Vienna, Austria, is on a visit to this country, looking into the pulp and paper trade outlook, preparatory to making arrangements for the introduction of Austrian pulp machinery.

Reports from Northern Ontario state that heavy snow falls prevailed in many parts of the north country on February 7 and 8. Cold weather accompanied the snow and made operating conditions in the woods much more favorable than they had previously been.

Mr. James Barry, sawmill manager at Renfrew for M. J. O'Brien, railway contractor, has purchased three of Breeze, Denison & Company's patent band sawmills, in two instances removing circular mills to make room for the band. He claims to gain one board on five in inch lumber, over the circular mills.

At the annual meeting of the Nicolet Falls Pulp and Lumber Company, held at Danville, P.Q., the following officers and directors were elected: Mr. F. McCrae, M.P., president; Mr. John Quinn, vice-president; Mr. Lamoureux, secretary; Messrs. E. W. Tobin, M.P., J. A. Crepeau, L. Hannan, Jos. Lepine, H. Girard, directors; and Mr. E. Rocket, treasurer and manager.

Wm. Copping, lumber manufacturer and exporter, Joliette, P.Q., has sent out an attractive calendar for the year 1914. A composite picture, in half-tone, is shown, representing various stages in the marketing and conversion of lumber. These include a cruising scene, a logging scene, a sawing scene in the mill, a typical lumber yard scene, and, in the centre, an illustration of an attractive house largely constructed of lumber.

Mr. Arthur Rushforth, managing director of the Dominion Mahogany and Veneer Company, Limited, Montreal, has resigned his position with the company on account of extensive interests in England, and Mr. George Kersley, the manager of the concern, has been appointed managing director in his stead. Mr. Kersley has had extensive experience in the mahogany and veneer business in both the European and American markets.

At the annual meeting of the Papineauville Lumber Company, held at Papineauville, P.Q., it was reported that the company had a very satisfactory year during 1913, there being an increase in business and profits. It was decided to erect a mill to manufacture hardwood veneers for cooperage and cheese boxes. The following officers were elected: President and manager, Mr. T. Bonhomme; secretary, Mr. H. J. Tetreau; directors, Messrs. T. Bonhomme, A. St. Amant, and J. S. Bock.

The Colonial Lumber Company, whose plant is located at Gillis Cove, Antigonish, N.S., have now over 1,000,000 feet of logs in their boom and a large quantity ready to be brought down in the spring. They will be ready to commence operations at their large sawmills and woodworking plant early in the spring. At present the company are giving employment to over sixty men and will have twice that number when their sawing operations commence.

Mr. W. J. MacBeth, formerly with the Fesserton Timber Company, Toronto, and who for many years previous to that was sales manager for the Parry Sound Lumber Company, has opened a wholesale lumber business on his own account at Toronto, with office at 60 Brock Ave. Mr. MacBeth is open to handle stocks on a straight commission basis for manufacturers who wish to place their stocks upon the market in that way. He has also made good connections with producers of Southern pine and is placing this stock upon Ontario markets.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-tf

Wanted

500,000 feet 1-in., 1½-in. Soft Elm.
700,000 feet 1-in. Basswood, Ash and Birch.
For delivery as soon as dry this year. State what you can supply and lowest prices on cars.
Box 945, Canada Lumberman, Toronto. 3-8

Wanted

Several cuts of good Maple and Beech to be sawed during Winter and Spring of 1914 in District between Georgian Bay and Toronto, also stocks of Birch from Muskoka District. Box 964, Canada Lumberman, Toronto. 4-7

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Wanted to Buy

500,000 ft. log run, sawn Hard Maple, various thicknesses, M. C. out. Must grade proper percentage 1S and 2S and No. 1 Common and not to exceed 20 per cent. No. 2. Will pay cash when loaded on cars; or will buy good Maple logs in the round, 12-in. and up diameter.

Write P. O. Box No. 1595, Montreal, giving best price and rate of freight to Montreal. 2-tf.

Wanted to Buy

4/4 White Basswood.
4/4 12-in. and over wide Soft Elm.
Round Rock Elm Logs 12-in. and up diameter, 20 to 35 ft. long—admit 10 per cent. good white gray elm. Any station in Canada.
Also square Rock Elm timber.
Highest prices. Spot cash.

HALL BROS.,
Manufacturers and Wholesalers.
Toronto and Marmora. 4-7

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

1 x 1 x 42.
1 x 1 x 48.
1 x 1½ x 42.
1 x 1½ x 48.
1 x 1¾ x 42.
1 x 1¾ x 48.

Require Thickness, 1/16-in. Plump.

Quality—Free from all defects.

Can take delivery of green or dry stock.

Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc. 24-1-TF

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft.
P. O. Box 392, Ottawa, Ont. 3-tf.

For Sale

Standing timber, forty acres pine and cedar, part or block.

S. A. PRICE,
71 Lakeview Avenue,
Toronto. 4

For Sale

Cut of Hemlock near Ottawa. Will manufacture to suit buyer.

HALL BROS.,
Manufacturers and Wholesale Lumber Merchants
Marmora and Toronto. 4-7

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que. c

Piling, Ties, Round Timber and Lumber

We can supply on short notice Jack Pine Piling or round Timber up to 60 feet long. Will have about 2,000,000 feet of Jack Pine Lumber this season of 1914. Would contract and cut it to order. Could also supply quantity of undersized Ties for construction work.

ANGUS PRENTICE & SON,
Sellwood Junction, Ont. 4

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,
Janesville, Wisconsin. 1-tf.

Wanted-Machinery

Wanted

Half-inch boom chain. Schroeder Mills and Timber Company, Salines, Ont. 4-5

For Sale-Machinery

A Bargain

44-inch Wick Gang for sale at a bargain. In first class shape. Apply,

Fraser Lumber Company, Ltd.,
Plaster Rock, N.B. 2-7

Woodworking Machinery: 2 24in. Ideal planers, matchers and moulders; 1 42 in. power feed band rip saw; 1 MacGregor-Gourlay variable power feed rip saw; 1 38 in. Frank pedestal bandsaw; 1 10 in. Crescent panel bandsaw; 1 Cowan panel raiser; 1 No. 1 Ballantine power feed dowel machine; 1 Hespeler improved upright power mortiser; 1 Cowan post boring machine; 1 36 in. Egan double drum sander. H. W. Petrie, Limited, Toronto, Montreal and Vancouver.

For Sale

1—Giddings & Lewis Horizontal Slab Re-saw.
1—Pair twin slabbers for ties.
1—Payette Box Board Edger.
1—Engine, 12 x 20, complete.
28—Wrought iron dry kiln trucks.
All in working order.

FIRSTBROOK BROS.,
Penetang, Ont. F

CORLISS ENGINES

150 to 175 h.p. cylinder, 16 x 36 in. stroke. This engine was new two years ago and was in actual operation less than one year. It is a Leonard's latest heavy design pattern, and is just as good as new. Would make an excellent Planing Mill engine. Can be bought at a bargain.

500 to 1000 h.p. Twin Vertical Steeple Compound Corliss Engine in first class running shape. Would make an excellent Saw Mill engine. A bargain for anyone who could use this engine.

500 h.p. Cross Compound Corliss Engine, direct connected to a 400 kw., 250 volt generator, complete, in excellent condition, with pumps and condenser. Can be bought at a bargain.

80-100 h.p. Brown Automatic Engine, just as good as new. 72 in. x 18 ft. Boiler, full front, with government inspections. Apply Thos. Hobbs, Mail Building, Toronto. c

Saw Mill For Sale

Practically new. Fully equipped. Capacity 18 to 20 M. ft. daily. Engine 60 h.p., boiler 68 h.p. Everything modern. In perfect running order. Suitable for heavy timber. Will sell on ground or F.O.B. cars. Further information from Box 949, Canada Lumberman, Toronto. 3-4

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted by thoroughly experienced Bandsaw Filer. Address H. J. c/o Canada Lumberman, Toronto. 2-3-4

Band Sawyer wants position. Single or double cut. Good references. Box 956, Canada Lumberman, Toronto. 4-6

Position wanted as single or double band or circular sawyer. Good references. Box 957, Canada Lumberman, Toronto. 4

Position wanted as single or double cut band sawyer for coming season. Good references. Box 940, Canada Lumberman, Toronto. 2-4

Position wanted as Sawyer in Ontario or West on double cut or circular. Good references. Box 961, Canada Lumberman, Toronto. 4-5

Situation wanted as Sawmill Foreman or Superintendent. 28 years' experience with high capacity mills. Expert mechanic. Band mills a specialty. West of Winnipeg preferred. Box 958, Canada Lumberman, Toronto. 4-6

BAND SAW FILER wants position. Twenty years' experience in United States and Canada. Can furnish gilt edge references. Would go where quality and quantity is wanted. Would expect highest wages. Single or double cut. Box 960, Canada Lumberman, Toronto. 4

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

Wanted a competent book-keeper for saw and door factory. Apply in own hand writing with references. Box 416, Midland, Ontario. 4

Men for sawmill wanted: Engineer, fireman, sawyer, jacker, setters tail sawyer, lath contractor, pilers and others for Band Saw Mill at Kearney, Ont., for summer season. Cut is pine. State age, habits and firms previously employed with. Apply W. J. Armstrong, Biscotasing, Ont. 2-3-4

Business Chances

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 12-tf.

ESTEVAN, SASKATCHEWAN

Splendid opening for Planing Mill. Lumber Yard could be run in conjunction with advantage. 5,000 population; with large district to serve; cheap power, fuel, light, etc.; city growing rapidly, first-class business assured. Write immediately to the Secretary, Board of Trade, Estevan, Sask., Canada. 4-8

For Sale

Fir and Spruce Timber Limits in the vicinity of Fort George. Price right and terms liberal. Will be sold in quantities as agreed upon up to 45 square miles. Timber not excelled in British Columbia.

If interested apply for further information to D. J. McEACHERN.
Alvinston, Ont. 3-6

To Lumbermen

A splendid opening is offered to a lumberman with from ten to twenty thousand dollars. Must be a practical man and able to take charge of a camp, etc. A splendid proposition to the right man. Apply in confidence to Box 955 Canada Lumberman, Toronto. 4

For Sale

Lumber Limits in Eastern Canada, 50,000 acres, large Sawmill, fully equipped going concern, on salt water. Correspondence solicited. Will be sold right to close estate.

Address, Timber Limits, care Canada Lumberman, Toronto. 22-tf.

Business For Sale

Sash and Door Factory in suburb of Montreal, on reasonable terms. Exceptional location to retail lumber. Premises and plant on long and very reasonable lease, therefore small immediate outlay required. Option to purchase location and machinery given if requested. Great opportunity—investigate. Address "Mill," P. O. Box 1652, Montreal, P.Q. 4

Retail Lumber and Planing Mill

For Sale

Situated in best thriving town in Ontario, served by three railways, average of two hundred houses built yearly. Business averages over \$35,000 yearly. Would consider selling machinery and rent buildings and real estate for a term of years. For further particulars apply to

HAROLD L. KEARNS,
Orillia, Ont. 3-4

Saw Mill For Sale or Lease

What is known as the iconic Island Mill at Little Current. Cutting capacity 140 M. inch lumber in 10 hours. In first class condition.

Possession can be given 1st January next. For further particulars apply to

THOMAS CONLON,
44 Church Street,
St. Catharines, Ont. 21-tf.

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 3-tf.

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. tf

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

Miscellaneous**For Sale**

One second hand Smoke Stack, 26-in. diameter by 53 feet, black iron, and 8 feet 6-in. screen, 1/4-in. mesh. For fuller particulars apply Box 71, Drummondville, Que. 4

Coal and Timber

Will purchase in large tracts only, either in Canada or the United States. We are principals and only deal with owners. No agents or options. Address/ "Cash," c/o Canada Lumberman, Toronto. 4-7

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

**MAIL CONTRACT**

Sealed tenders, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 6th of March, 1914, for the conveyance of His Majesty's Mails, on a proposed contract for four years, six times per week each way, over Streetsville (via Meadowdale and Churchville) Rural Mail Route, from the Postmaster General's pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Streetsville, Meadowdale, Churchville, and at the office of the Post Office Inspector, Toronto.

A. SUTHERLAND,

Post Office Inspector.

Post Office Inspector's Office.
Toronto, January 19th, 1914.

Near Dimension

A sawmill was cutting veneer flitches whenever suitable timber was secured, and was making some quartered oak lumber as an incident thereto, says the Hardwood Record. Sometimes when the grain was not running straight the sawyer would have on end of a flitch blocked out considerably in edging to get straighter grain in the veneer, and this would make a tapering, triangular piece. Often in the final running of a flitch the sawyer would chalk it for cross cutting, maybe two or three feet from one end, and at times both ends. Quite a large

pile of these ends had accumulated, running in length from two to nearly four feet, in thickness from two to four inches, and in width from six to twelve inches.

"What do you do with those short ends from the flitches?" was asked of the millman.

"I am just wanting to know what to do with them," the millman replied. "When they are four feet or longer I can put them back on the carriage and run them into short lumber, but below four feet they are too short to handle on the mill, and I don't know just what to do with them."

It was then suggested to him that they were good material for making small dimension stock for the furniture trade, but the idea didn't sound good to him because he had never found it was possible to realize a good enough price for such stock to make its manufacture worth while.

The same mill was working out and trimming up the boards and triangular pieces incident to sawing the flitches, and from these there were a lot of edgings and end trimmings that went over to the cross-cut saw and from there down to the woodpile. These and the ends made enough good quartered oak to have started a fair assortment of small dimension stock, and, besides, the process of sawing other oak logs yielded plain oak trimmings that could certainly be used in the same work.

The shorts from the flitches could have been worked into barrel heading by the addition of a special short log mill for that work. But it does not seem good policy to use them for that purpose when there is just as much need for shorts and dimension stock in the furniture trade as there is for heading in the barrel business.

It was enough to make one feel a bit peevish to see those shorts in fine, thick quartered oak, with only a knot here and there to mar the perfection, which could easily be worked out in reducing to small dimensions. When one considers that those needing such thick stock as barber chair arms can get it by gluing up several thicknesses of one-inch short lumber, the claim that there is nothing in the small dimension stock business seems inconsistent. If there is not it is a fault of the trade some way, somewhere; a lack of getting together and getting at the business as it should be. There is a use for every good piece of oak from the size of a man's finger and a foot long, up, and there certainly should be good use for the thick quartered ends from veneer flitches that range from two to three feet in length. To see stock of this kind going to waste is one of the strongest arguments in favor of having the makers and users of hardwood dimension stock get together and have an understand-

ing, and build up a larger trade in this line of wood products that will benefit both the producer and the user. Good hardwood timber is too valuable to waste in this way, especially since there is a need for all of it and it is merely a matter of getting at that need in the right way.

Cooperage in the U. S.

The United States exports cooperage stock to practically all of the leading countries of the world, and some articles find their way to little-known islands and obscure places in foreign lands. It is a valuable trade and long has been. It has had its ups and downs, but on the whole it has been as regular as any other line of business, and in some directions there is good prospect of increase. The demand for slack cooperage is world wide.

The export of cooperage material has not been of sudden growth. It rests on the solid foundation of many years of trade. Staves for tight barrels were exported from this country in large quantities more than 200 years ago, and export has continued down to the present. The following figures show the number of staves exported for six periods of ten years each.

1790 to 1800 . . .	334,529,000
1800 to 1810 . . .	325,421,000
1810 to 1820 . . .	232,829,000
1820 to 1830 . . .	242,794,000
1830 to 1840 . . .	309,258,000
1840 to 1850 . . .	266,351,000

Excelsior as a Mattress Material

There is a new idea in regard to excelsior, which suggests possibilities for a product from pine and fir, in a consular report from Munich, Switzerland, which says that the Federal Department of Industry there has been experimenting with excelsior produced from fir and pine as a material for mattresses in hospitals and military barracks, and that these experiments have proven eminently satisfactory.

The idea suggested by this in connection with the excelsior manufacturing in this country is that of promoting the uses of ex-

celsior, especially made from pine and fir, as a material for mattresses on the ground of special health-giving qualities. One of the great fights waged in this country is against tuberculosis and catarrhal asthmatic diseases. In this connection it is well known that pine needle pillows are health improving. This idea has been exploited more or less for quite a number of years. Also it is well known that breathing air laden with resinous odors is good and healthful. That is why people seek the pine woods for health now and then.

Now this all being true and accepted, why not excelsior mattresses made from pine and fir for the same healthful reasons? There are machines which will make the excelsior fine and soft so that it will serve all the purposes of comfort, and the excelsior mattress should be cheap enough to commend it on this score and there ought to be room for considerable development of the excelsior business along this line if it were gotten at in the right way and promoted industriously.

OATS, HAY,
Bran, Shorts and Flour
—CAR LOADS—
A. W. FAIRWEATHER
Traders' Bank Bldg., TORONTO

FOREST PRODUCTS EXPOSITION
CHICAGO COLISEUM APR. 30 - MAY 9
NEW YORK GRAND CENTRAL PALACE MAY 21-30

Montreal Engineering Co.,
Limited,
164 St. James Street,
Montreal.

Timber limits examined,
cruised and surveyed.
Waterpowers developed.
Pulp and Paper Mills de-
signed and constructed.
Projects financed.

FOR SALE

- 1—46-in. No. 1 Wickes Bros. Gang with divided press rolls and oscillating slides, 20-in. stroke, 44-in. saws. Capacity 80 to 100 M. ft. per 10 hours. In first class running order.
- 1—54-in. x 22-in. Clutch Pulley for driving Gang.
- 1—30-in. x 22-in. Tightener with Boxes.
- 1—Wickes Bros. 9 saw Trimmer arranged to trim all lengths from 8 to 21 feet. No Saws. Only used one season and in good working order.
- 1—Heavy Allis Circular Saw Husk complete with 2 Parkhurst Saw Guides. All good as new.
- 1—Dunbar 2 Block 4 ft. rift Clapboard Machine with capacity 6 to 8 M. per 10 hours.
- 1—Dunbar double Clapboard Planer and Jointer.
- 1—Dunbar 2 Saw Trimmer.
- Clapboard Machinery only used one season.
- 2—Solid Iron Pulleys 84 x 13 in. face.

SHIVES LUMBER CO., LIMITED
Campbellton, N. B.

Review of Current Trade Conditions

Ontario

There is still very little to say about trade conditions in connection with the lumber business in Ontario. Although, in harmony with other lines of business, the lumber trade has improved during the past few weeks, there has been no important increase in the actual volume of trade, but rather an improvement in the feeling, because of the general improvement in financial and industrial movement in stocks. The prospects, however, are quite encouraging and indicate that a large amount of lumber will be moved during 1914. Low grade pine and hemlock are very scarce on the market and are being held and sold at better prices than they probably would bring in comparison with other goods, if it were not for the shortage of stocks. A well posted wholesaler, discussing this feature of the situation, recently stated that it was quite possible that No. 3 hemlock from Michigan, which he considered to be in the same class as No. 2 from Ontario would soon be an active competitor. In fact he reported that some was already selling f.o.b. cars, Toronto, at prices very little in advance of what Canadian manufacturers were asking for their stock f.o.b. point of shipment. The same wholesaler, discussing mill and dead cull pine, reported that No. 3 common yellow pine, which he classed along with No. 1 mill cull white pine, was now being sold at prices "delivered Toronto" practically the same as the delivered price on dead cull white pine. At present, this does not make much difference to the white pine manufacturer, as he has very little of this stock to offer. The same conditions, however, might have quite an important effect upon the new stock. Of course there is the possibility that the market for yellow pine may have improved to such an extent before white pine new stock comes on the market, that competition from this quarter will not be so keen. At the same time, however, yellow pine is now with us more or less continually as a sobering influence.

Shingles are selling slowly and prices have not altered. This is to be expected at the present time of year. There is a fair prospect, however, of a brisk market in shingles in the early spring, as farmers have had a very prosperous season and are considering extensive repairs and new structures, which will consume both lumber and shingles. Lath are still practically out of the market so far as Ontario is concerned, but there appears to be quite a large quantity of spruce lath being held in the Maritime Provinces.

Hardwoods continue steady at present and the market is normal for this time of year. Several reports which the Canada Lumberman has received of late refer to the fact that large quantities of hardwoods which were blown down in the older sections of Ontario by the storm of Good Friday and that in early November, 1913, may be expected to come on to the market this year. These trees are now being manufactured into logs and delivered to the mills. Some reports indicate that the total quantity of this class of stock will be large and may be expected to affect prices for a time. With active trade, however, such as is indicated by present conditions, it is hoped that this factor will only have a temporary effect.

Eastern Canada

A better feeling is noticeable in the trade at Montreal. No extensive business is in progress, which is natural at this time of year. Dealers report, however, that trade is increasing steadily. Orders for forward delivery are becoming more numerous. It is believed that easier money would be sure to bring about a good demand for lumber in Montreal, as there is a house famine and rents are very high. Building contractors are looking forward to a very active season.

The spruce market at Boston continues quiet and prices are still on the weak side. Frames are selling at \$24.50 and random at \$22. The base figure for dimension seems to be \$24, although some firms are refusing to take less than \$24.50. Spruce boards are quiet and offerings are light. Covering boards 5 in. and up wide, 8 ft. and up long, are selling at \$22 and matched spruce boards at about \$2.50 more.

Better conditions are reported from the lumber trade in New Brunswick than those which prevailed a month ago. There is not much shipping in progress, but the outlook for the English market is quite encouraging. A few mills have sold their cuts of deals for 1914 at prices similar to those prevailing last fall, as reported in our market letter elsewhere. The indications are that prices will be firmer, but this will only be in keeping with the higher cost of the logs which, as usual, have been more expensive to secure this winter than in previous winters. The chief cause seems to be the higher cost of labor and the decline in its efficiency. Trade with American ports is still quiet, as

both buyers and sellers are holding off, in the anticipation of market improvement. January was a hard month in the trade, on account of the severe weather. Much more favorable weather has prevailed lately and reports indicate that trade is already commencing to brighten. Laths are firmer and shingles are moving a little more actively, although prices are unchanged. There is a good outlook for the building trade in New Brunswick during the coming season.

Logging conditions during the winter, so far, have been ideal and a fair cut of logs is now assured, so long as driving conditions are alright in the spring. Sawmilling plants along the St. John are busy with their repairs and are apparently preparing for a busy year.

Great Britain

Reports from Great Britain lay special stress upon the importance of the recent reduction in the Bank of England's discount rate from 4 per cent. to 3 per cent. stating that the relief given to industry and trade is no doubt considerable and will help to strengthen the tendency towards trade revival. Bank reports in fact are more favorable today in Great Britain than they have been since 1896 and all indications in the financial and industrial world are that a revival of business activity is at hand.

A much more cheerful feeling is prevalent on the London spot market than that of a fortnight ago. A tendency is noticeable to look ahead and study probable market conditions. Values have not declined as was predicted in some quarters. Deliveries at London docks during the week ending January 24th totalled 3,848 standards as compared with 4,332 standards during the corresponding week of 1913. At Churchill & Sim's recent auction sale, a lot of 3 x 9 in., 12 ft., 2nd Quebec spruce was sold at £12 10s, and 3 x 7 in., 10 to 13 ft., brought £10 5s. 4th quality 3 x 9 in., 12 to 13 ft., was sold at £11 10s. Quebec birch planks, 4 x 5 in. to 18 in., 7 to 15 ft., brought 1s 1d per cubic foot.

Reports from Liverpool are to the effect that business continues normal with nothing of any special interest to note. The hardwood trade is fairly satisfactory, but is quite lacking in features. A little more activity is reported in c.i.f. and ex quay buying for forward delivery. The best selling line at present is plain white oak lumber, for which there is a steady demand with firm prices except for ungraded parcels. The trade in quartered oak lumber is quiet and stocks are more than sufficient. Prices, however, are firm and only limited quantities are finding their way into consumption. Pine deals at present are firm at Manchester. There is a scarcity of fourth quality Quebec, and owing to the high prices in Canada and the United States it is not expected that much of this stock will reach Manchester this season. This, however, is something that remains to be seen.

United States

Definite improvement is reported in market conditions in the United States. The railroad companies are coming into the market again with orders for several thousand cars and the appearance of the first of these orders gave rise to a general belief that railroad buying on a large scale would soon start. An encouraging outlook is also reported in connection with agriculture. Stocks at the majority of the mills and in country yards are also in favor of an improvement in trade, as there is no sign of a serious over-supply. It is interesting to note that probably the most encouraging factor at present is yellow pine trade. Stocks at the mills are only moderate and prices are stiffening in spite of the fact that retail yards are not yet buying at all extensively. Some reports have been going about to the effect that the yellow pine trade is approaching a period of activity such as it has never experienced before. This may be taken either with or without a pinch of salt, according to one's own information. Logging conditions in northern Michigan have been favorable and woods operations are progressing in a very satisfactory manner. Estimates which have been made on a conservative basis indicate that the supply of logs in northern Michigan will be about 30 per cent. below normal as mild weather at the commencement of the season delayed operations greatly. Reports of improvement are also received from Pacific northwest mill centres. Improvement is noted also in the hardwood trade and the outlook for spring business is favorable.

The northern pine market at Chicago continues steady. The trade during January was fair and a slight improvement was noted with the opening of February. Prices have not changed. Mill stocks are broken and stocks of logs are likely to be lower than normal, so that an advancing market is expected. At Buffalo, the trade in northern pine continues quiet, but enquiries are more numerous.

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View of Mills in Sarnia.

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Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

St. John Trade Improving

St. John, N.B., February 9th (Special to the Canada Lumberman): The market at St. John is quiet. Very little shipping of lumber is going on, and very little has been shipped during the past two weeks. In fact, as far as the English business is concerned there have been no liners by which shipments can be made to Liverpool, as the present Royal Line of mail steamers have taken no deals, and the C. P. R. liners are sailing from Halifax. Small parcels are going forward to London, but not to any great extent. Shipments to American ports are very limited, only two or three vessels are now loading here for United States ports. So as far as St. John is concerned, the lumber being shipped forward, will have no effect upon the markets. The local market for house building lumber of rough kinds is fair. Of course the month of January was a very hard month, and the cold weather retarded much work which was to have been taken up, but during the past ten days moderate weather has started things, and factories report better trade.

The outlook in the English market is for early business to be good. In fact some two or three mills have sold their cuts of deals for 1914 at about the same prices as last fall sales, viz., \$17 to \$17.50 per M. for deals, specifications running 50 per cent. 7 and 8 in. x 3 in., balance 9 x 3 in. and up, with the scantlings at \$2.50 per M. less; ends at 2/3 the price of deals, and fourths at \$15, all at mills, St. John buyers paying all other charges. What little advance the sellers have from last year's prices will be taken up in the increased cost of the logs which are being cut this year, as apparently every year logs cost more to produce. Labor not only is costing more, but is of an inferior quality. No sales have as yet taken place in the American market from St. John, as the buyers and sellers seem to have the same ideas, viz., that prices will be better a little later on. In fact it is felt that the American market will be from \$1 to \$2 per M. better than in 1913.

Laths are being sold here at from \$2.75 to \$3 per M. on sellers' wharves for the season's sawing.

Shingles are moving a little better than they were, but prices remain about stationary. Box business is good with a steady demand and prices remain firm.

The outlook for local building for 1914 looks very good, and if all the work is taken up and carried along, which is now being figured, a good demand for all rough lumber and factory work should continue through the season.

The winter to date has been ideal for lumbering all over the province, and a fair cut of logs is now being moved to the banks of the rivers. The present month of February sees the beginning of repairs to milling plants all along the river front, and from now on the mills will be under the hands of machinists and masons, until ready for spring work, which will begin about April 1st.

Messrs. Stetson Cutler & Company are making extensive improvements to their Pleasant Point mill yard where they are installing a "turning table" to direct sawn stock from the runs, all over the yard, making it more convenient and saving labor.

J. E. Moore is making extensive alterations in his new mill at South Bay.

Ottawa Expecting Good Local Trade

Ottawa, February 8th (Special to the Canada Lumberman): Some of the beneficial effects of the recently amended United States tariff are beginning to be felt here. Within the past two weeks, several orders for blocks of lumber, in different grades, ranging in quantities from 2,000 to 500,000 feet have been placed by American buyers. Most of these orders are for this season's cut and it is predicted that more are to follow.

Trade locally is showing signs of improvement and the prospects are that this year will be a fairly good one for local dealers, as there will be an extensive building programme to be carried out. The estimates for expenditures on public works, which were tabled in the House of Commons last week, totalled \$190,735,176, a decrease of \$11,920,990, compared with 1912. Ottawa, however, is treated very generously in the estimates for there is \$1,932,000 to be spent here this year in new buildings alone. Some of the improvements on which this money is to be spent include: \$1,000,000 for new departmental buildings; addition to parliament buildings, \$100,000; addition to eastern block, \$35,000; addition to Royal mint, \$35,000; new observatory building, \$80,000; new customs building, \$500,000; new drill hall, \$50,000; improvements to Victoria museum, \$40,000 and other additions and

improvements to government buildings in the city each entailing an expenditure of several thousands of dollars.

Some reductions in the prices of high grade pine have been made during the past week. Pine good sidings 1 in. x 7 in. and up, which formerly sold at from \$52 to \$55 are now more nearly at \$52 to \$54; and for 1 1/4 to 1 1/2, \$55 to \$58 is being quoted instead of \$56 to \$60 as was the case a few weeks ago; while 2 in. x 7 in. and up instead of from \$58 to \$65 are quoted \$58 to \$62. Two grades of pine shipping culls are about \$1 lower, while pine box boards are at \$18 and \$19 for 1 x 4 in. and up, 6 ft. to 11 ft., and \$18 and \$19 for 1 in x 3 in., 12 ft. to 16 ft.

In the House of Commons last week Hon. H. R. Emmerson, formerly Minister of Railways and Canals, asked the government if it was their intention to discontinue the construction of freight and passenger cars in wood and substitute steel. Hon. Frank Conchane, in reply, stated that the government had not decided to discontinue the use of wood for the purposes mentioned by Mr. Emmerson. This sets at rest the rumor that the Intercolonial Railway intended replacing all its wooden cars with steel ones. It is learned that the government has not even given the matter consideration.

Mr. Moses Haney, who for the past few years has been the resident representative in Ottawa for the lumber firm of Skillings, Whitney and Barnes of Ogdensburg and New York, is to be transferred to Sheldrake, Mich., at the end of next month. Skillings, Whitney and Barnes have had a resident representative in Ottawa for the past 40 years and whether they will continue to do so after Mr. Haney goes away is yet unknown here. It is intimated, however, that the amount of business the firm has been doing here lately is not sufficiently large to warrant keeping a resident representative. Mr. Haney says that he cannot say what the future policy of his firm will be in the Ottawa Valley.

Mr. J. R. Booth, the veteran lumberman, who was seriously injured some time ago, is now able to go out for a drive on fine days.

Montreal Trade Improving

Montreal, February 9th (Special to the Canada Lumberman): There is a distinctly better feeling in the lumber market. Naturally one does not look for a large volume of business at this period of the year, but many lumber dealers report that trade is picking up in a very encouraging fashion. A fair amount is being sold for forward delivery. With easier money, the prospects are excellent. Montreal is suffering from a house famine, and rents are being raised in consequence of the scarcity. The building contractors who, from various causes, were unable to supply the normal demand last year, will probably have a very busy season during 1914, and this will involve a heavy demand for lumber.

The building permits for last month showed a slight falling off, as compared with the corresponding period in 1913, being valued at \$409,645, as against \$485,600.

The ground wood market continues firm, for freshly ground pulp, the stock on hand being lessened by the heavy demand. It is hoped that before the spring freshets bring additional power, the stored pulp will have practically disappeared, although one mill in a remote part of the country has still a large quantity on hand.

Western Pole Output Will Be Light

At the recent annual meeting of the Western Red Cedar Association, held at Spokane, Wash., the president, Mr. H. C. Culver, in his address stated that poles, posts and piling had moved freely at fair prices during the first half of the year 1913. A general recession of trade had taken place during the last half of the year, and to-day the industry was in a very unsatisfactory state. He believed, however, that, very shortly, a more healthy condition of affairs would prevail. Stocks were not over large and they were fairly well assorted. The output during the present winter would probably be greatly restricted. As a result of lack of snow, practically no stock was taken out before the middle of January. Sawmill companies had also been inactive and would not produce their usual quota of poles, etc. The president drew attention to the extensive use of poles for conveying electricity. In the United States there were over 800,000 miles of poles lines. Over 32,000,000 poles were in service on these lines and the annual renewal requirements were over 4,000,000 poles. It was claimed that over 65 per cent. of these were cedar. He believed that they might predict with confidence a fair movement of their products during the coming year.

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THEIR ORIGIN, VALUE AND
USE—COMMENT AND VIEWS
ON AN IMPORTANT BRANCH
OF THE TRADE.

The Russian Veneer Industry

By Henrik Cronstrom

Veneer logs in Russia are cut from December to March and transported to the factory in winter by rail, but in summer often by water, being made to float along with logs coming from lighter trees, to keep them from sinking. The logs are carefully stored away at the factories and are kept in water-basins during the warmer season. This prevents splitting and change in color, and the logs are therefore, when work on them begins, quite as fresh as if they had just been cut.

Immediately before cutting the logs are steamed under pressure, for about six hours. This steaming must be done with much care. The pressure rises slowly from 0 to 15 pounds per square inch. All condensation must be drained from the boilers so the logs do not lie in the water. This is very important. After the steaming the logs are carried as quickly as possible to the veneer-lathe.

Then follows the most important process after cutting. Glue spreading and drying. This is somewhat different in different factories. In most of them the veneer is carried direct from the veneer-lathe to the glue spreaders. Some factories, however, will first pass the veneer through a so-called wringer, to squeeze out a part of the water through the pressure. This tends to reduce considerably the time of the actual drying process. This operation will often remove from twenty-five per cent. to forty per cent. water, hence it is easy to see that the expense of the drying is reduced to quite an extent. Some factories now use even a hot air drying machine for this purpose. The main thing is, however, that the pre-drying—where it is done—is never a complete drying, but has for its purpose only a somewhat lower presence of water in the veneer; hence, practically speaking, it is still in a wet condition when it reaches the glue-rollers.

When the wet veneer goes through the glue rollers it imbibes not only the glue itself, but at the same time the materials that make it waterproof. The glue covered veneer comes then into the so-called glue press, where it is submitted to a high pressure between steam heated plates. In this press where the veneer is held a longer or shorter time, depending upon its thickness, the largest part of the moisture which is in the logs is removed. From this press the veneer is introduced into the so-called dry press, where it dries off and cools off quite thoroughly.

When a veneer for export is to be produced, without special designation of its purpose, the only thing still to do is to cut the veneer into the desired sizes, which is done in a so-called clipper for sizing, and to carry it through a scraper, whereupon it is ready for export.

With several factories, however, a part of the veneer is treated somewhat further, by sawing it into ready plates for tea boxes, chocolate, ash trays, etc. In these cases the appearance of the veneer is often changed by letting it go through a coloring machine, imitation machine, smoothing machine, etc.

This is the general way of manufacture told as briefly as possible.

If we now want to make a comparison between this method and the one employed in the United States we have to remember that in an ordinary factory in Russia there is worked in the main only birch and alder three-ply veneer of a thickness of 4, 5 and 6 millimeters, that is about 5/22-in., 6/32-in. and 7/32-in., while most factories here send out a highly finished product for different purposes. A comparison, if it can be made at all, must limit itself therefore to certain leading features of the process.

How Logs are Stored

Moreover, the writer wishes to call the attention of his audience to the fact that his knowledge of the American veneer industry was gathered during the visits that he has had occasion to make to factories in this country, and it cannot therefore be complete. Hence, it is quite clear that he will be guilty of errors in the following, for which he wishes to apologize beforehand:

First, as to the way in which the logs are kept in storage at the factories, the writer thinks he has noticed that in most factories in this country the logs are kept all the year round on dry ground, while most Russian factories keep the logs in water-basins or tanks during the warm season. The former method is without doubt a disadvantage to the American factories. In spring, when the sap begins to rise in a growing tree, the same thing will happen also in a freshly cut stem. This causes a change of color in the wood, and makes it brittle, and this is especially the case with the birch tree—in fact, as the logs are kept longer on dry ground, they will deteriorate in other ways—

by cracking, etc. As is known, a fresh stem can be kept in water almost an indefinite time without changing to any great extent.

We now come to what is perhaps the most important difference between the two methods—the boiling, cooking or steaming of the logs. The American factories cook the logs for twelve to twenty-four hours in open water reservoirs or tanks. The Russians steam the logs for six hours in closed boilers under pressure. The purpose of the steaming is, of course, to render the logs sufficiently soft and tough for cutting. This purpose is attained in both methods; perhaps the wood gets a little softer through cooking in water. But is something else not likely to take place with steaming? We shall see. In steaming, according to the American method, the logs will take up in themselves more water, so that they will contain practically a higher proportion of water than will some fresh lumber that is treated in the Russian style. All this water will then have to be evaporated by means of the drying process. How does this compare with the Russian style? Through the stewing, in steam, under pressure, a large amount of the water is driven out of the log; the higher the pressure which is used, the more water is removed. Still, the pressure should not be raised to more than fifteen pounds, for otherwise the wood will get too dry. There is, therefore, in this method less water left to be evaporated, following our drying. But something else will happen when this steaming under pressure is used—that is, the sap-cells of the wood are caused to burst, the pores are opened, and the largest part of the sap and foreign matter which is locked up in the pores is driven out.

As before stated, this steaming must be done with care, the pressure being increased slowly. An increased pressure from the start would destroy the structure of the wood. The main thing is to obtain from the process a product that is soft enough for cutting, with open pores, free from sap and containing less water than before dampening.

A gentleman in the United States, who is thoroughly acquainted with the veneer industry, told the writer that he has met with trouble in attempting to dry maple veneer in a drying-machine with steam-heated plates. The difficulty consisted in that from the interior of the wood a sap came oozing, which stayed on the outside and formed a sticky mass. He then tried to steam maple logs without pressure, before the cutting. The result was that the drying in the plate-dryer could be undertaken. What can we learn from this practical example? In the first place, that though steaming in water a large, even perhaps the largest part of the sap remains in the wood. In the second place, how easily the sap can be driven out by contriving a pressure in the cells inside, for there, as in this example, a wet veneer strip is placed between two hot plates; where the temperature is over 212 degrees, the water which is in the wood changes direct into steam, and a pressure results, which drives out the sap. In the third place we see from this example that even through steaming without the least pressure, a part of the sap can be withdrawn. Still, steaming without pressure carries with it one disadvantage that each veneerman has experienced, namely—that the steaming does not work evenly through the whole mass of the wood.

But why is it that the removal of the sap is such an important matter? Because in the first place, as everybody knows, sugar, sap, rosin, and similar substances, are extremely hostile to every glueing. We cannot glue together maple veneer, when the exterior is covered with a coat of sticky sap. In the second place, getting rid of the sap plays undoubtedly a considerable part in producing waterproof veneer, as we shall see farther on.

As far as the cutting itself is concerned, that is done in Russia in the same way as here, and with machinery about the same; still there is a little difference. Sometimes a lathe with a movable knife is used, that is, the knife moves forward and backward parallel with the cutting edge. As we know, it is easier to cut wood when the cutting edge moves in the direction toward the fibers of the wood. Moreover, a smoother cut is obtained. In fact, this is a principle which has come to be employed with almost all woodworking machines. A veneer-slicer is known to be built on the same principle. Why then should this principle not also be followed in a veneer lathe? It is true that the machine gets more complicated, but it should be remembered that such a machine need not be used for rough center work stock, excepting only for the best face veneer. Moreover, the knife in such a lathe retains its sharpness quite a while.

Drying and Glueing

As to the drying and glueing, which then follows, the main dif-

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ference consists in this, that according to the American method the veneer is first dried and then glued, while the Russian process is just the opposite. We shall see farther on what can happen in the two instances. When the drying is done in the American way, the pores in the wood are closed more or less, the surface becomes sometimes somewhat case-hardened; at other times, glossy. When this veneer passes through the glue-spreaders, the main part of the glue stays on the surface. A small part crowds into the wood, as the moisture of the glue opens the pores somewhat. What happens when the Russian method is followed? When the wet or only slightly dried veneer goes through the glue-spreaders, the pores are open, and not alone this, but are also free from sap. The waterproof glue penetrates into the pores and is absorbed by them.

When this veneer is then placed under high pressure between steam-heated plates, the glue is pressed very strongly into the pores. In this way even the larger portion of the water which enters the wood and glue turns into steam and goes off at the same time, carrying with itself part of the glue, whereby the pores are filled even more. Inasmuch as the external strata in three-ply are usually very thin, it will be seen that these are almost entirely impregnated.

It might be thought that this process works slowly and is expensive. The fact is that it is slower than the American process, but there is still another circumstance which should be taken into account. First, we see that while the American veneer contains perhaps forty per cent. to fifty per cent. water before the drying, the Russian contains not much more than half this amount. There is therefore so much less water to be evaporated. If we, however, study the principle of the drying itself closely, we find that two entirely different principles come into play. Without further going into details on this matter, it might only be stated that according to the principles employed in the American plan, a sufficiently large heat is applied to the wood—such an amount as will cause the entering water to pass into water vapor, then the air is heated sufficiently to be able to take up this moisture and finally this moist air is gotten rid of in a mechanical way by blowers, etc., which requires power. Another principle for the drying is that to convert the water which passes into the wood into steam direct. For this purpose no air is needed. It is this principle that is employed in the Russian method.

It would lead us entirely too far to show here in detail which method takes more steam. One fact is, while the Russian factories get along with only about half the amount of steam that is employed by the American ones, still they employ more steam at the time of steaming the logs. Moreover, there are obtained in Europe at least two glue presses with steam-heated plates for the same price as are paid here for a blower dryer. Everything being normal, the capacity, with glue presses of this kind, is about 180 cubic feet for ten hours, or if we take for example 5/32 3-ply equals 13,500 square feet. If anyone should want to characterize in a short, perhaps somewhat exaggerated way, the difference between the American 3-ply and the Russian waterproof 3-ply, this could be done, according to the writer's opinion, perhaps in the following manner. The American 3-ply consists of three strata of wood glued together and the glue which is between the strata has entered only to a small extent into the wood itself, the pores of which are partly filled with dried or solidified sap. Hence the moisture is easily absorbed through the outer stratum and dissolves the glue. The wood fibre or the skeleton itself of the wood is, as will be noticed, not materially attacked by the moisture, but it is the pores that imbibe the water, which causes the wood to swell, and through this again the glueing can also be destroyed by the breaking apart of the wood itself.

Russian 3-ply on the other hand consists of three strata of veneer glued together, and the waterproof glue which is employed is to a large extent driven into the pores of the wood which are empty and

free from foreign matter so that the whole face of the wood is made waterproof. It is clear without further explanation that 3-ply must become much more capable of withstanding the moisture.

If the American veneer would be glued with waterproof glue one would obtain, of course, a more or less waterproof product, but this would still be not of the same kind as the Russian, because the wood itself would continually be susceptible to moisture.

It might still be said that every Russian veneer factory has a well-equipped laboratory for the examination of glue, etc. The writer has not noticed anything of the kind in the American factories.

Cost of Production

A Russian factory of middle size is built for about 210,000 cubic feet of veneer per year. This is about a carload of twelve tons a day. Of this there are only about 10,000 cubic feet unglued in different thicknesses. The material is divided about as follows:

	Cu. ft.	Sq. ft.
4 mm. = 5/32-in. = 50% of all glued veneer	= 100,000	= 7,500,000
5 mm. = 6/32-in. = 30% of all glued veneer	= 60,000	= 3,600,000
6 mm. = 7/32-in. = 15% of all glued veneer	= 30,000	= 1,500,000
Thicker	5% of all glued veneer	= 10,000 = 330,000
Unglued different thicknesses	10,000	= 600,000

Total ... 210,000 13,530,000

Of every thickness there are about sixty per cent. first quality and forty per cent. second quality goods. To make up this production the following number of machines are employed:

- 5 boilers for the steaming of the logs.
- 3 to 4 lathes, depending upon the thickness of logs.
- 3 to 4 clippers.
- 2 glue spreaders.
- 2 glue presses.
- 4 dry presses.
- 2 stock cutting machines.
- 1 to 2 scrapers.

The number of employees in such a factory is about 70 men, or for two shifts, 140. In case of part of the veneer being worked thoroughly there is to be added one bet-machine (coloring machine), one smoothing machine, one imitation machine, five or six circle saws. These require for two shifts 30 men. The total crew employed in this way is about 170 men.

To obtain an idea about the cost of production in such a factory the total expense for the main operation is divided over the whole number of cubic feet of finished veneer. In the United States all calculations are based on square feet, hence the expense has also been reduced to this basis, but we should remember that these figures cannot be absolutely correct, but are only an average because the cost of production, of course, is somewhat different with different sizes. The following figures are not gotten up in a theoretical way, but are taken from results obtained in practice.

Cost of production is as follows:

	Average per cu. ft.	Average per sq. ft.
Wood	31.60c	0.496c
Labor	13.00c	0.205c
Glue	12.60c	0.198c
Administration, interests, insurance, up keep	19.83c	0.311c
Freight to England	9.10c	0.139c
Total	86.13c	1.349c
Market price about	\$1.04	1.627c

The market differs, of course, but depends upon the preceding figures and on an average a profit of .278c per square foot may be added.

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 200 M 2 x 6" " " "
 100 M 2 x 8" " (60 per cent. 4 to 18')
 50 M 2 x 10" " "
 75 M 2 x 12" " (15 per cent. 22 & 24')
 About 50 per cent. No. 1 and No. 2 Dim. each.

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Head Office: Coristine Bldg., MONTREAL

**CHAIN-BLOCKS
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Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.

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EDGINGS

Ontario

Geo. Watson, Flesherton, has purchased a site for a sash and door factory at Markdale, Ont.

The A. M. Shaw Company, Limited, Fort Frances, Ont., have a large contract for furnishing ties and timber for the Canadian Northern.

The Larchwood Lumber Company, Larchwood, Ont., recently secured a contract from the town of Sudbury for two hundred thirty-five foot poles at \$4 each.

The Frank H. Harris Lumber Company, Limited, has been incorporated with capital of \$40,000 and head office at Toronto. The incorporators include W. H. Harris, F. H. Harris and M. L. Harris.

Construction work on the Abitibi plant at Iroquois Falls, Ont., has progressed so rapidly that operations will probably be commenced with the ground wood pulp mill not later than June 1. The mill will have a capacity of 150 tons per day.

The Welland Lumber Company, Limited, has been incorporated, with a capital of \$100,000, with head office at Welland, Ont., to carry on business as lumber merchants. The provisional directors are J. W. Rounding, F. Edwards and G. E. Tufts.

The City Council of Ottawa is calling for tenders for lumber until 4 p.m. on February 24th. Specifications may be seen at the offices of the engineer, City Hall Building, Ottawa, or at the office of the MacLean Daily Reports, Limited, 220 King Street West, Toronto.

The Lakes Timber Company, Limited, notice of whose incorporation was published recently in the Canada Lumberman, have opened offices at Fort Frances, Ont., on Front street, near Portage avenue, with Mr. Chas. Payne, accountant, as office manager. The company have a large contract from the Canadian Northern, for ties, and expect to get out 300,000 by the time the ice goes out. Their camps are south of Shoal Lake, near Old Mine Centre. Mr. A. B. Colburn, the head of the company, at Fort Frances, is a well known resident of the Rainy River district and last year was the mayor of International Falls.

Booth & Shannon, lumber manufacturers, Biscotasing, Ont., commenced rebuilding in October, the mill which they recently lost by fire. They expect to be ready for sawing by May 1st, 1914. The new sawmill will consist of one main building 132 x 32 feet; one trimmer extension 36 x 20 feet; one lath and picket mill extension 32 x 30 feet; one boiler house 40 x 40 feet and one machine and blacksmith shop 24 x 36 feet. The mill frame is of heavy timber construction and all the upright timbers on the ground floor are set into concrete piers. The main drives are also set on concrete. The machinery consists of one right-hand circular outfit, 42 in. Waterous steel carriage; one 4-in. Prescott steam setter; one 11-in. steam feed; one Waterous Big Champion combination edger and strip machine cutting cants 8-in. in thickness, transfer to trimmers; one standard lumber trimmer; one lumber sorting table 125 ft. in length and one five-saw slash table. The log deck equipment consists of standard jack ladder haul-up; standard steam log kicker, steam log stop and loader and steam nigger. The lath mill consists of a heavy lath bolter and lath machine, also a picket mill. The power plant comprises four 60-in. diameter 16 ft. boilers in Dutch oven setting; one steam pump, copper tube heater, and one heavy duty slide valve engine. All the transmission, shafting, gearing, etc., together with most of the above machinery were supplied by the Waterous Engine Works Company, Brantford, Ont., who also furnished all plans for the construction of the mill and installation of the machinery, which was under the supervision of Mr. W. J. Armstrong, of Parry Sound. The plant will have a sawing capacity of 60,000 feet B.M., per day of ten hours.

Eastern Canada

P. N. LeBlanc has commenced the erection of a woodworking factory at Moncton, N.B.

J. E. Moore, St. John, N.B., is making extensive alterations to his new mill at South Bay, N.B.

The sash and door factory of Amedes Alard at Montreal, P.Q., was partly damaged by fire recently.

Noiseux & Boy, sash and door manufacturers, St. Jean Baptiste (Rouville) P.Q., have dissolved their partnership.

Legault & Leger have been registered at Montreal, P.Q., as sash and door dealers. The members are A. Legault, T. C. Leger and P. Legault.

The lumber and shingle mill belonging to J. O. Gilbert & Son, Bishop's Crossing, P.Q., was totally destroyed by fire recently. In addition to the loss on the building and plant, a considerable quantity of lumber and other stock was also destroyed. The loss will amount to about \$5,000, with only a small

amount of insurance. J. O. Gilbert & Son are the owners of extensive timber limits and it is expected that they will rebuild the mill.

The Donnacona Paper Company have started operations, which were postponed owing to an accident to the flume. The company have a 50-ton newsprint mill.

Stetson, Cutler & Company, St. John, N.B., are installing a turning-table at their yard at Pleasant Point. This will direct sawn stock from the runs to the various piling points throughout the yard, thus simplifying the work and saving labor.

La Compagnie Industrielle de Vaudreuil, Limitee, has been incorporated with a capital of \$49,000, with head office at Vaudreuil, Que., to carry on business as lumber manufacturers. The provisional directors are J. A. Bourdeau, financial agent, Montreal, Que.; A. R. Lefebvre, manufacturer, A. Castonguay, H. Becotte, and J. A. Legault, notary, of Vaudreuil, Que.

Western Canada

C. T. W. Piper, of Vancouver, who has a mill in Burnaby, B.C., is buying limits near Port Haney and may erect a shingle mill.

Robert McNair, Vancouver, B.C., contemplates opening his timber limits near Coquitlam lake, bringing the logs out to Burrard Inlet by railway.

C. T. W. Piper, Burnaby, B.C., is negotiating for a site for a shingle mill at Port Haney, B.C. The proposed site is to the east of the Haney Brick Company's works.

Grain Growers Lumber Company, Limited, has been incorporated with a capital of \$10,000, with head office at Vancouver, B.C., to carry on business as lumber merchants.

Willow River Lumber Company, Limited, has been incorporated with a capital of \$50,000, with head office at Vancouver, B.C., to carry on business as lumber merchants.

The East Kootenay Lumber Company has paid the British Columbia government \$2 a thousand, plus royalty, for a tract of yellow cedar near Waldo, B.C. This is a record price.

George H. Green, of Rossland, B.C., is taking out shingle bolts with the intention of putting up a mill at Green City in the spring, with a capacity of between 30,000 and 40,000 a day.

Practically all the timber in the Toba river valley, B.C., is now controlled by the Canada Timber & Lands Company, of Toronto, a recent purchase having been made. The area of the district is about 26 square miles.

J. E. Doherty, general manager of the British America Mills & Timber Company, has acquired the assets of the Walsh Sash & Door Company, New Westminster, B.C. The factory has been reopened, with W. E. Walsh as superintendent.

The Vancouver Lumber Company, Vancouver, B.C., is making arrangements to put in operation the Red Fir Lumber Company's plant on Burrard Inlet, which it purchased in 1913. This mill has never been operated. Some remodelling is now being done. The mill is to be used for the manufacture of cedar lumber.

W. H. Mueller, of Vancouver, who bought the rights to seven miles on Stave lake from the Stave Lake Timber Company, will start to log them shortly. Seven miles of logging railway will have to be constructed. George P. Challenger, formerly with the Imperial Timber & Trading Company, will superintend operations.

Sealed tenders are being received by the Minister of Lands of British Columbia, not later than noon March 31st, for the purchase of License X 83, to cut 6,510,000 feet of timber on an area situated in the vicinity of Thunder Bay, Jervis Inlet, N. W. D., and containing 532 acres more or less. Two years will be allowed for the removal of the timber. Particulars may be secured from the Chief Forester, Victoria, B.C.

The annual meeting of the Canadian Pulp and Paper Association will be held at the Windsor Hotel, Montreal, on February 26.

The Smart Turner Machine Company, Limited, Hamilton, Ont., are supplying The Black Donald Graphite Company, Calabogie, Ont., with a force pump.

British Columbia shingle manufacturers are reported to be organizing a selling agency, modeled somewhat along the lines of the Red Cedar Shingle Manufacturers' Association in the state of Washington.

The market for lumber is very poor in the towns and cities, but the sales to farmers around harvest time were good, although prices were low and are likely to remain so for a year at least, possibly two years, as the large mills are over-stocked.—J. S. MacDonald, Canwood, Sask.

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Already sawn or to be sawn

Cuts of 1" and 2" Hemlock
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5/8" Cull Spruce or Norway
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1" Merchantable Birch, 3 to 5 feet long

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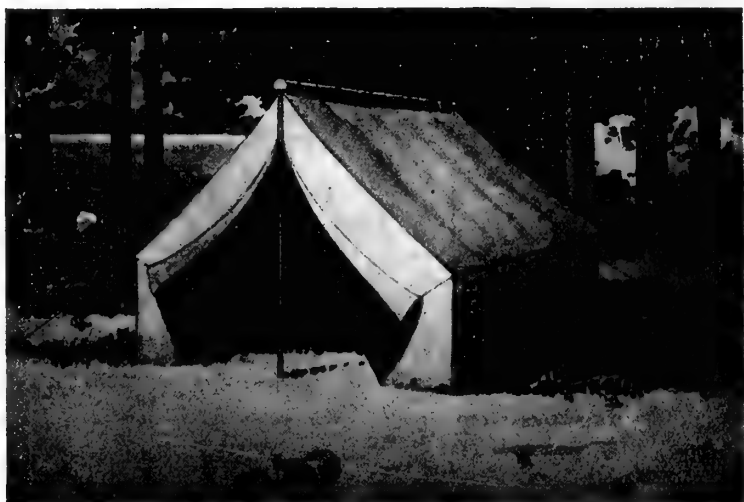
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We guarantee that **Spartan Belting** when used under the same conditions will transmit more power and with greater economy than any other form of transmission.

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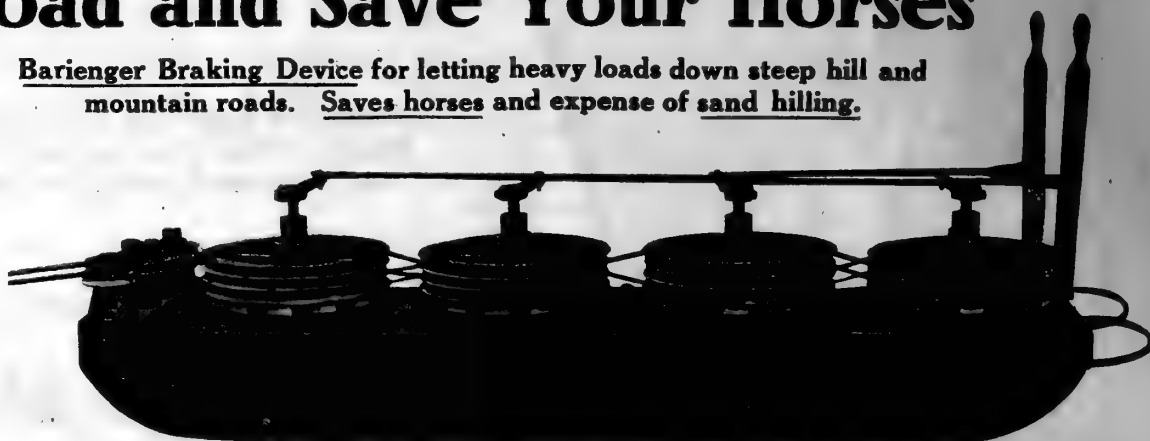
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10	12	54
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11	15	96
14	16	171

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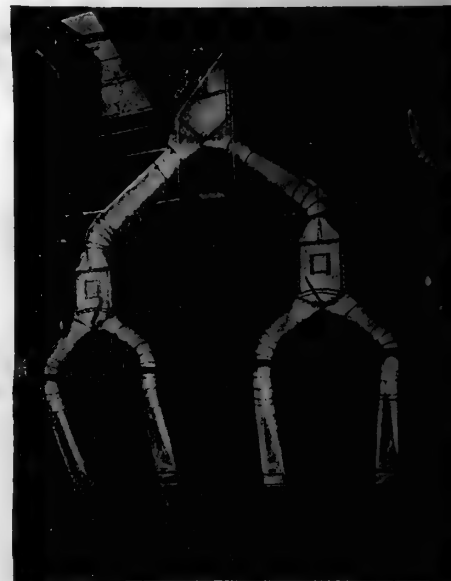
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WRITE FOR PRICES AND TERMS.

Address: SUITE 301-302, 22 COLLEGE STREET, TORONTO, ONT.

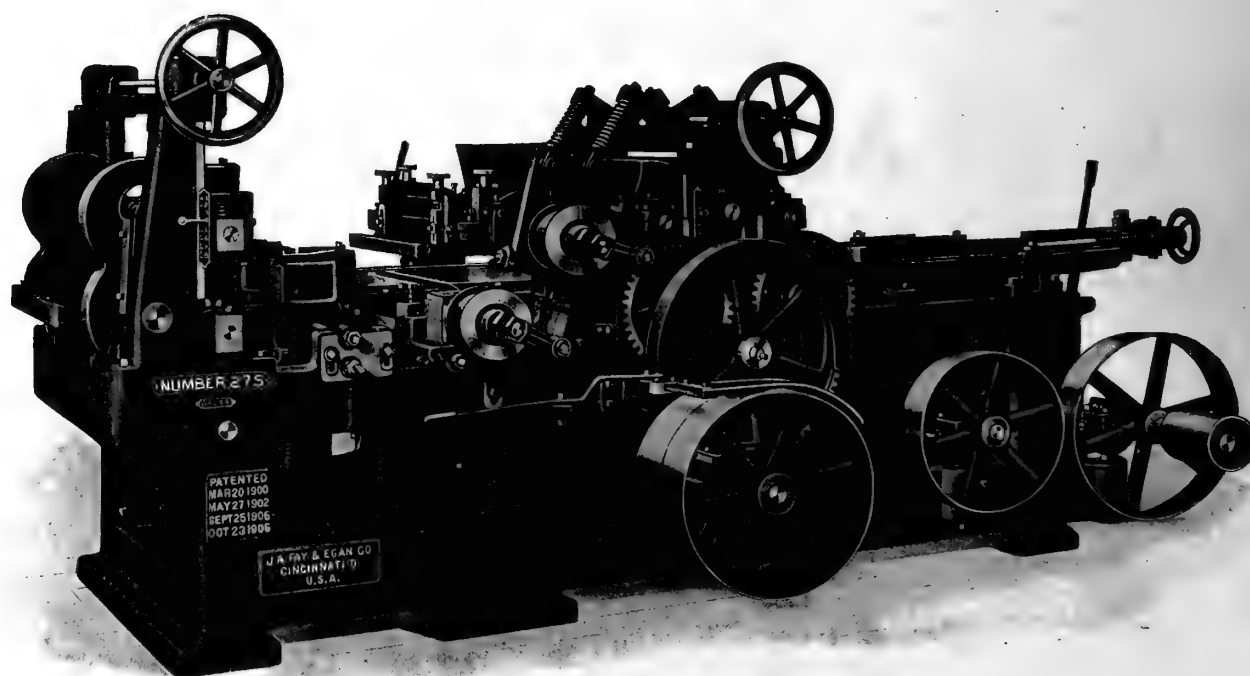
What I Can Do For The General Planing Mill

You don't have long runs on a few kinds of patterns, the kind that requires a "333" — your work is mostly short runs, different kinds, different sizes, different patterns—the kind that need me. Here's what I can do for you:

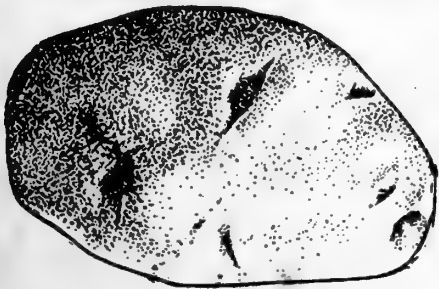
1. I will take care of all your matching and sizing up to 24" x 8".
2. I will do all your double surfacing up to my full rated width.
3. I will run all the flooring you need.
4. I will serve you as an inside moulder carrying formed cutters up to 1 1/4" projection.
5. I am readily accessible in every part, so that changes can be made quickly, easily and economically.
6. I have all the conveniences, all the time-saving adjustments and all the grade-raising value of the latest fast-feed matchers.
7. I have a mechanically perfect drive that makes every ounce of power count.
8. I run at a low operating cost, both for power consumed and upkeep expense.
9. I am medium in weight and size.
10. I am also medium in price, so that any mill can afford to put me in.
11. I am making money—big money—for hundreds of successful planing mill owners, men who, like you, are operating a general purpose mill.
12. I will do the same thing for you.
13. I invite you to write today—now—to my designers and builders.

J. A. FAY & EGAN CO.

465-485 W. Front St., Cincinnati, Ohio, U. S. A.



Potato Scale Boiler Cleanser



This compound is a deadly enemy to scale and not only removes scale from tubes but if used regularly in the feed water prevents the formation of scale.

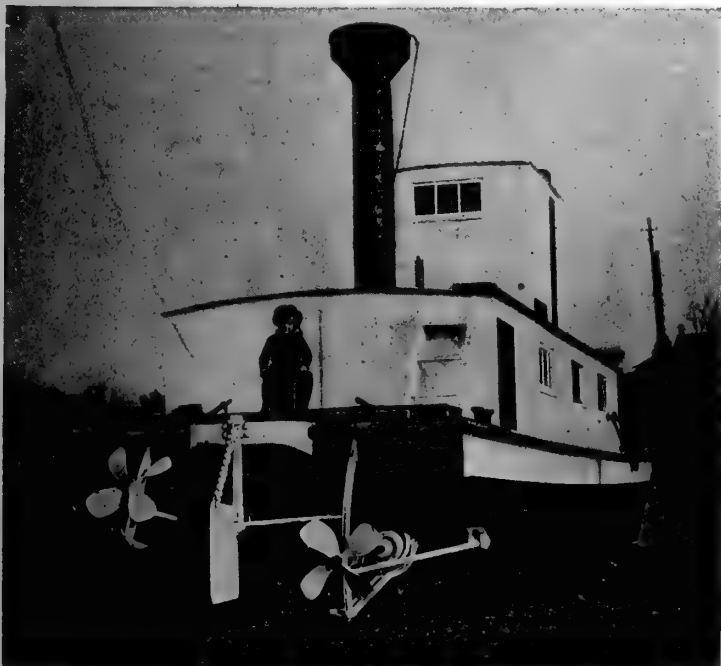
It contains no ingredients that can in any way harm metal.

Potato scale is sold under a guarantee—thousands are using it and are perfectly satisfied. Write for sample keg.

C. C. Snowdon

Box 1384

Calgary, Alta.



**Not altogether what we
say but what users say**

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs,
in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.



**Gumming Seven Twenty-Four
Foot Saws a Day and the Wheel
Has Not Glazed or Burned After
Seven Months Use**

Aloxite Saw Gumming Wheels

Are making such records as this—giving such real saw-gumming results. They cut fast, and clean—hold their shape—show long life, and they cut cool without case-hardening the saw.

Let a Trial Wheel show you.

**THE
CARBORUNDUM COMPANY**

PLANTS:

Niagara Falls, N. Y. Manchester, Eng.
Reisholz Düsseldorf, Ger.

STORES:

New York Chicago Boston Cleveland
Philadelphia Cincinnati Milwaukee
Grand Rapids

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	\$55 00	57 00
1 1/2 inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1 1/2-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	45 00
5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	36 00	36 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
4/4 No. 3 cuts	28 00	28 00
5/4 and 6/4 No. 3 cuts	32 00	32 00
8/4 No. 3 cuts	33 00	33 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
1 x 10 and 12 mill cull stocks	24 00	24 00
1-in. mill cull sidings	22 00	22 00
5/4 and 6/4 x 4 m.r., m.c. out	26 00	26 00
5/4 and 6/4 x 5 m.r., m.c. out	26 00	26 00
5/4 and 6/4 x 6 m.r., m.c. out	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out	36 00	36 00
2 x 10 common	26 00	26 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1 1/2-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill culls	20 00	20 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16-ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 50	24 50
2 x 4 to 12-in., 12 and 14 ft.	23 50	23 50
2 x 4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 20 ft.	28 00	28 00
2 x 4 to 12-in., 22 ft.	27 00	27 00
2 x 4 to 12-in., 18 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00	34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 18x18, 20x20, up to 32 ft.	34 50	34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00	35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 50	35 50
10x20, up to 32 ft.	36 00	36 00
6x18, 8x18, up to 32 ft.	36 50	36 50
6x20, 8x20, up to 32 ft.	37 50	37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	44 50
No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1 1/2, 1 1/2 and 2-in. Fir rough	47 00	47 00
1 1/2-in. No. 1 4-ft. pine lath	4 50	4 50
1 1/2-in. No. 2 4-ft. lath	4 20	4 20
1 1/2-in. 32-in. pine	1 00	1 00
1 1/2-in. No. 1 4-ft. hemlock lath	3 75	3 75
1 1/2-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XXX B. C. cedar shingles	2 25	2 25
XXXX 6 butts to 2-in.	3 20	3 20
XXXXX 6 to 23-16-in.	3 40	3 40
XXXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1 1/2 and 2-in.	60 00	60 00
Ash, white, No. 1 common	45 00	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	39 00	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	39 00	39 00
Birch, No. 1, com. and bet., 4/4	33 00	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, No. 2 and 3, common	18 50	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nd, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, plain, 1st and 2nd, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1 1/2 and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, 1/4 cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, 1/4 cut, 5/4 and 6/4, 1sts and 2nds	88 00	88 00
White oak, 1/4 cut No. 1 common	55 00	55 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices:

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1 1/2-in. & 1 1/2-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	45 00
Pine good strips:		
1-in.	40 00	42 00
1 1/2-in. and 1 1/2-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1 1/2-in. and 1 1/2-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1 1/2 and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	20 00	22 00
1 1/2, 1 1/2 and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00	25 00
Pine, box boards:		
1"x4" and up 6'-11'	18 00	19 00
1"x3" to 6", 12'-16"	18 00	19 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1 1/2-in.	19 00	21 00
mill culls out, 1 1/2-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16"	18 00	20 00
1"x9"-10" and up, 12'-16"	22 00	24 00
1 1/2"x7" 8-9" and up, 12'-16"	22 00	24 00
1 1/2"x10" and up, 12'-16"	22 00	24 00
1 1/2" & 2"x12" and up, 12'-16"	25 00	28 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16"	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1 1/2, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1 1/2-in. x 4-ft.	4 00	4 35
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1 1/2-in.	3 00	3 25
Red pine mill run	3 25	3 80
Hemlock, mill run	2 75	3 00
32-in. lath	1 80	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70	75
Oak—Michigan and Ohio		
By the dram, according to average and quality	65	72
Elm		
By the dram, according to average and quality, 40 to 45 feet	80	90

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 22
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1 1/2 and 1 1/2 in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1 1/2 in., 8 in. and up wide 55 00
1 1/2 in., 8 in. and up wide 57 00
2 in., 8 in. and up wide 60 00
2 1/2 and 3 and 8 in. and up wide 75 00
4 in., 8 in. and up wide 85 00

No. 2 Cuts

1 in., 6 in. and up wide 31 00
1 1/2 in., 6 in. and up wide 42 00
1 1/2 in., 6 in. and up wide 44 00
2 in., 6 in. and up wide 47 00
2 1/2, 3 and 4 in., 6 in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6 in. and up wide 24 00
1 1/2 and 1 1/2 in., 6 in. and up wide 33 00
2 in., 6 in. and up wide 33 00
2 1/2, 3 and 4 in., 6 in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 6-in. 25 00
1-in. x 8-in. 26 00
1-in. x 10-in. 27 00
1-in. x 12-in. 29 00
1 in. x 13 in. and up 34 00
1 1/2, 1 1/2 and 2-in. 30 00

No. 1 Barn

1 inch 31 00 45 00
1 1/2, 1 1/2 and 2-in. 36 00 45 00
2 1/2 and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1 1/2, 1 1/2 and 2-in. 30 00 36 00
2 1/2 and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1 1/2, 1 1/2, 2-in. 20 00 25 00

Box

No. 1, 1, 1 1/2, 1 1/2, 2-in. 22 00 25 00
No. 2, 1 1/2, 1 1/2, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1 1/2, 1 1/2 and 2-in. 20 00
No. 2 17 00 18 00

Lath

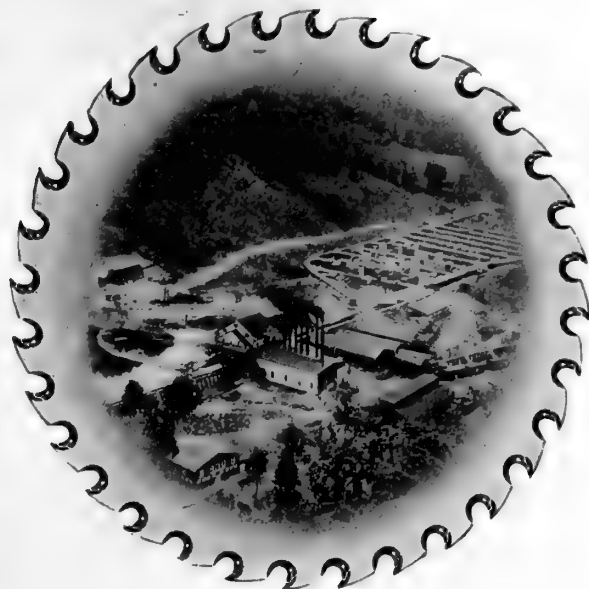
No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimensions, Rough or S. 1 S. and 1 E.	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4	15 00	18 00	22 00	20 00
2 x 6	18 00	18 00	22 00	20 00
2 x 8	18 00	18 50	22 00	20 00

DISSTON Inserted Tooth Saws



DISSTON Points and Holders

Advantages of the Chisel Point Saw

While the first cost of a Chisel Point is more than that of a solid tooth saw, it is much cheaper in the long run for the following reasons:

It is not necessary to buy a larger saw than is actually required on the start, for the Chisel Point Saw always retains its original diameter. It never requires gumming and unless it meets with an accident very seldom needs hammering.

The only tool required to keep it in order is a file. It can be pointed or sharpened in a few minutes and in the event of the saw striking iron in the log all necessary repairs can be made in a very short time by inserting a new set of points. Consequently the money saved in buying a smaller saw, the additional saving effected through not requiring a gummer or other tools usually necessary for keeping a Solid Tooth saw in order and quick re-fitting make the Chisel Point Saws decidedly the most economical.

In addition to the foregoing, owing to the angle at which the teeth strike the wood and the ample gullet room for taking care of the sawdust, the Chisel Point Saw requires less power to drive at a given rate of feed through a cut of given thickness than any other pattern of saw.

Disston Points

One of the leading features of the **Disston Point** is the shoulder at top of bit which rests against the saw plate, affording a strong permanent support. This shoulder makes it impossible to mill the groove in a Disston Point. To make the groove conform to an exact shape, therefore, the point, after drop forging, is placed in a powerful press before the hardening and tempering operations. This press gives a smooth, even, correct form to the groove. A Disston point fits perfectly and remains firmly in place until the edge is worn down.

A milled point, on the other hand, cannot have this shoulder. The pressure is born on the foot of the point which rests on a projection in the saw plate, some distance from the periphery line. The metal back of the head wears or bends away from the point, leaving a slight space which permits more or less play in the point.

A Disston drop forged and pressed Point remains solid and firm, but a milled point soon begins to chatter and lead out of the cut. The increasing wide-spread use of Disston Points is the best possible assurance that they not only meet every requirement, but outwear all others as well.

Send for our new book, "Saw Appreciation"



Reg. U. S. Pat. Off.

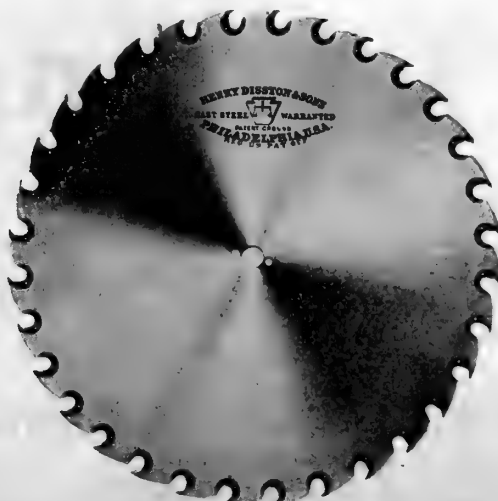
Henry Disston & Sons, Limited

Keystone Saw, Tool, Steel and File works

TORONTO, CANADA

Branch at Vancouver, B. C.

Established
1840



CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	43 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24

RED BIRCH			
	4/4	5/4 to 8/4	
	44 - 46	30 - 32	18 - 20
	46 - 48	32 - 34	20 - 22

SAP BIRCH			
	4/4	5/4 and up	
	38 - 40	26 - 28	20 - 22
	40 - 42	28 - 30	20 - 22

SOFT ELM			
	4/4	5, 6 & 8/4	
	38 - 40	27 - 29	18 - 20
	40 - 42	29 - 31	20 - 22

BASSWOOD			
	4/4	Thicker	
	38 - 38	27 - 29	19 - 21
	38 - 40	29 - 31	21 - 23

PLAIN OAK			
	4/4	5/4 to 8/4	10/4 and up
	54 - 56	35 - 37	23 - 25
	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
	4/4	5/4 to 8/4	10/4 and up
	48 - 50	30 - 32	21 - 23
	55 - 57	32 - 34	22 - 24
	64 - 66	44 - 46	24 - 26

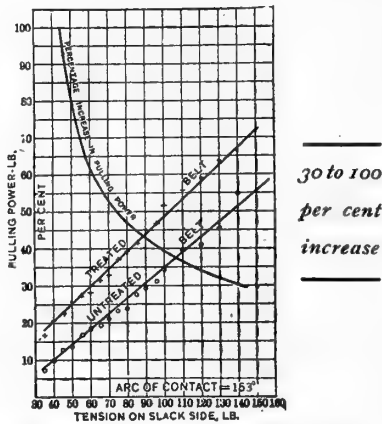
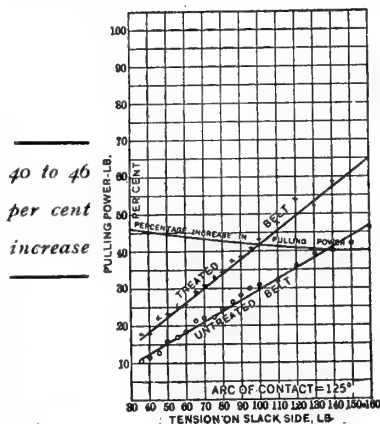
BOSTON, MASS.			
	White pine uppers, 1 to 2 in.		
	Selects, 1 to 2 inch	96 00	98 00
	Fine common, 1 in.	80 00	88 00
	Fine common, 1 1/4 to 2 in.	68 00	70 00
	No. 1 Cuts 1 in.	70 00	72 00
	No. 1 Cuts 1 1/4 to 2 in.	55 00	55 00
	No. 2 Cuts, 1 in.	60 00	64 00
	No. 2 Cuts, 1 1/4 to 2 in.	40 00	40 00

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	
No. 1, 1 x 8	37 00	
No. 2, 1 x 12	40 00	42 00
No. 2, 1 x 10	35 00	36 00
No. 2, 1 x 8	34 00	35 00
No. 3, 1 x 12	32 00	33 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	29 00	29 00
Canadian spruce boards	25 00	26 00

Spruce, 10 in. dimension	28 00	
Spruce, 12 in. dimension	29 00	
Spruce, 9 in. and under dimen.	26 00	
Spruce, 8 in. and under dimen.	25 00	
10 and 12 in. random lengths, 10 ft. and up	26 00	
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	21 50
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00	
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00	

1 1/4-in. spruce laths	4 40
1 1/2-in. spruce laths	3 90

New Brunswick Cedar Shingles			
Extras	3 55	3 75	
Clears	3 25	3 40	
Second clears	2 75	3 00	
Clear whites		2 65	
Extra 1s (Clear whites out)		1 50	
Extra 1s (Clear whites in)		1 00	
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 05	
Red Cedar Eureka, 18-inch 5 butts to 2-in.		4 25	
Red Cedar Perfection, 5 butts to 2 1/4		4 80	
Washington 16-in. 5 butts to 2-in. extra red clear	3 50	3 60	
The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/18-in. 8-ply maple, sanded one side, 3 1/4 c. per ft.; 1/4-in. 8-ply maple, sanded one side 4c per ft. All F.O.B. Jamestown, New York.			

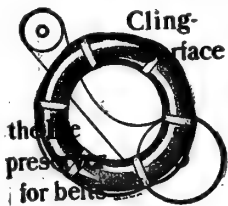


These Curves Show the Increased Pulling Power Produced by Cling-Surface

and as they were plotted by Robert Thurston Kent, M.E., you can know they are authoritative

Mr. Kent tested two new belts—one treated with Cling-Surface, and the other not. To make the test perfectly fair both belts were first driven side by side in a New Jersey factory. Then, by means of a testing frame built especially for the purpose, some weights, and a polished rigid pulley, the comparative tests indicated by these curves were made. The complete statement which Mr. Kent has prepared covering these tests is now printed in booklet form. If you

wish, as you should, to improve economy in and in connection with your belts, we will be pleased to mail you a copy. Cling-Surface stops slip; makes belts pliable, easy running, and long lived; waterproofs; and reduces friction. Cling-Surface is used all over the world with equal success—in the driest, wettest, hottest and coldest climates. Your order or inquiry will have our best and quickest attention. We quote f.o.b. Toronto.



Cling Surface Co

1021 Niagara St Buffalo N Y

New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 73

WHY?

Pay for Bags, Sacking, Freight, Handling, Cadging on light dirty oats, when the above items of cost are the same on

Heavy, Clean, "National" Oats

purchased direct from producers and shipped from our elevators in the heart of the best oat sections of the Western Provinces.

Write or wire for quotations

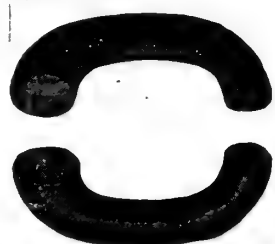
National Elevator Company, Limited
WINNIPEG, MANITOBA

Port Arthur, Ont.

Calgary, Alta.

"AJAX" Loading Chain

WELD:



Sectional view showing comparative size of weld and chain.

Experience has taught us that a good chain cannot be made from cheap material. In Ajax chains you get the best steel obtainable and every weld guaranteed. Ajax chain is guaranteed to pull stiff before breaking.

MANUFACTURED ONLY BY

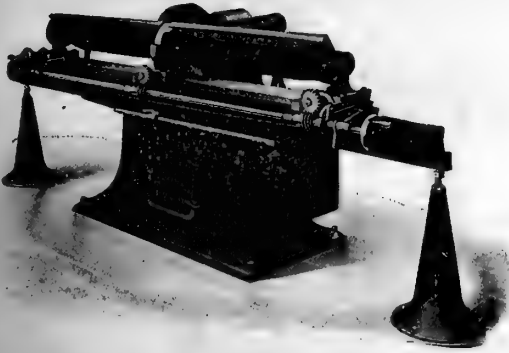
Standard Chain Company, Pittsburgh, Pa.

MONTREAL—Alexander Gibb, St. Nicholas Bldg.

VANCOUVER—John Burns, 329 Railway St.

WINNIPEG—Bissett & Loucks

AUTOMATIC FEED KNIFE GRINDER



Type "B," range from 51" to 130". Price—From \$220 to \$395.

This cut represents one type only of our line of automatic knife grinders. We make all sizes from a small \$65 bench grinder to a 130 in. machine.

We also manufacture a complete line of automatic

Saw Sharpeners

for both circular and band saws.

No mill is complete without one or more of the Rogers-Buffalo Machines.

Send for our catalogue—it is free on request.

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.



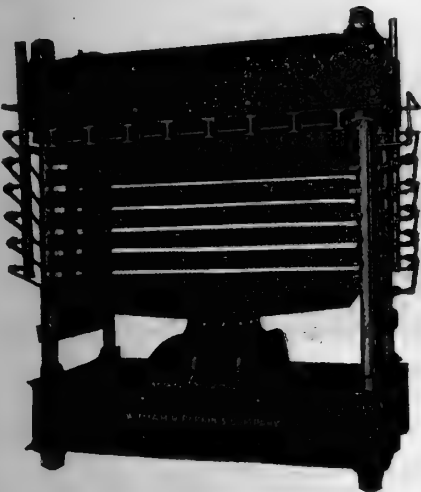
DIXON'S SOLID BELT DRESSING

THESE handy sticks contain all the ingredients needed to keep a belt soft and pliable, with a surface that clings without being sticky. Use it on any kind of a belt, put it on while the belt is running. Send for "The Proper Care of Belts," No. 207.

Made in JERSEY CITY, N.J. by the

Joseph Dixon Crucible Company

Established 1827



Veneer Press and Dryer

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

WRITE FOR PRICES AND QUOTATIONS

William R. Perrin and Company, Ltd.
TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack coopeage.

The Laidlaw Bale-Tie Co., Limited

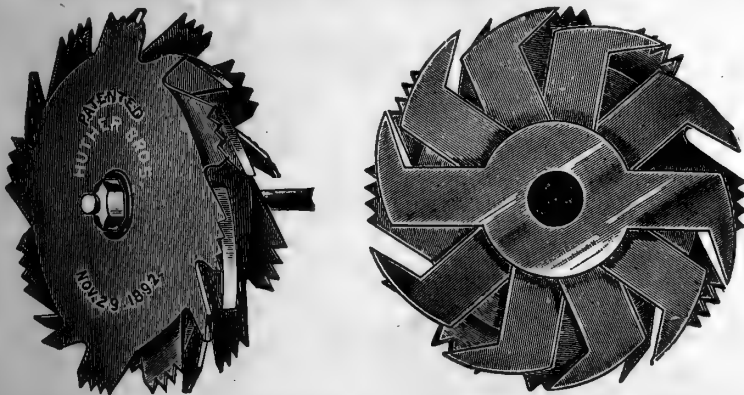
Winnipeg
Harry F. Moulden & Son

HAMILTON,
ONTARIO

Vancouver
George W. Laidlaw

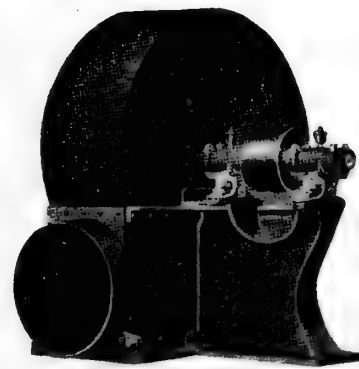
HUTHER BROS. PATENT GROOVER OR DADO HEAD

For cutting any width groove from one quarter inch to 2 inches or over



Can be used on any Circular Saw Material. Will cut a perfect groove with or across the grain. This is the only Dado Head on the market that gives entire satisfaction on all classes of work. No screw adjustment. For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of wood working machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense.
HUTHER BROS., SAW MFG. CO., Inc., 1103 University Ave., ROCHESTER, N.Y., manufacturer
Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.

WHY you should install the Mahony Blower System in your Planing Mill



Fifty per cent. higher efficiency than any other on the market to-day, uses $\frac{1}{2}$ less power, costs less to install, no cyclone required, eliminates back pressure on the fan. I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

A. Mahony, 512 Wellington West, Toronto



Griplock Riveted Chain Belt



Section of Griplock Riveted

No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis., a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

We would be very glad to mail you sample links for your inspection.

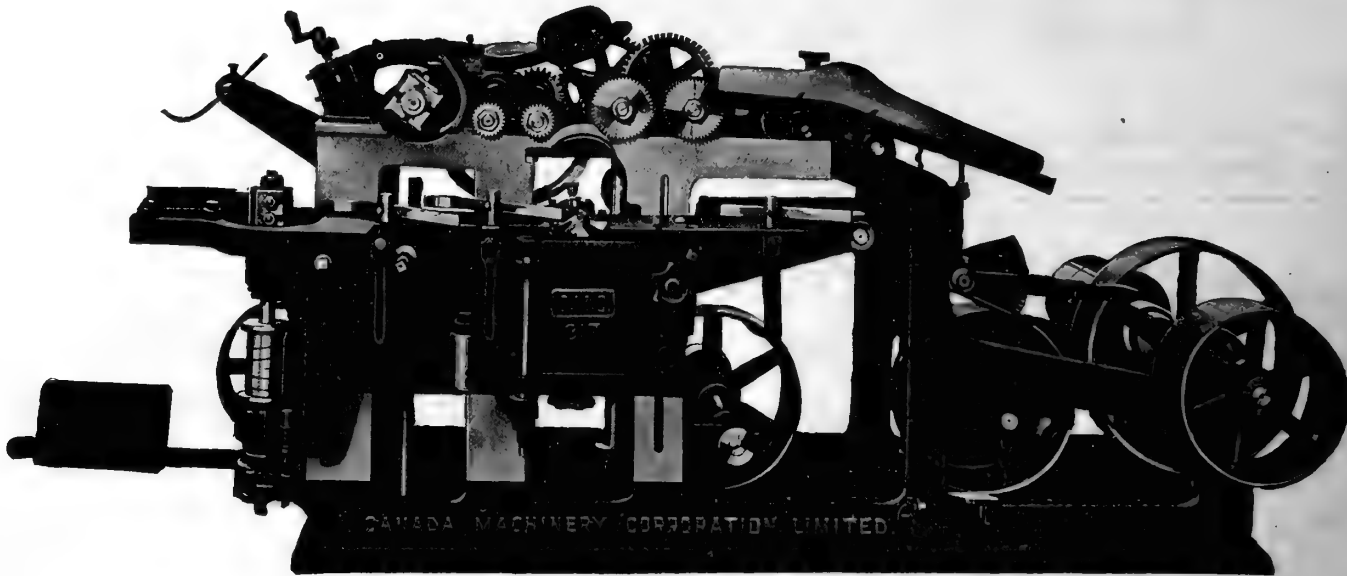
Sold by **The A. M. ELLICOTT CO., Montreal, Que.**

Elevating, Conveying and Transmission of all kinds a specialty

SASH



STICKER



No. 317 Sash Sticker With Boring and Grooving Attachment

A very convenient sticker for sash factories.

For making stiles, bars and mullions in one operation.

Supplied with or without boring and grooving attachment.

This machine is strongly built throughout and the feed is by four corrugated rolls.

The parts are all readily accessible; all adjustments being made from the working side of the machine.

Bulletin No. 317 particularly describing this machine sent on request.

Our moulder catalogue describing the complete line of moulders we build, to be had for the asking.

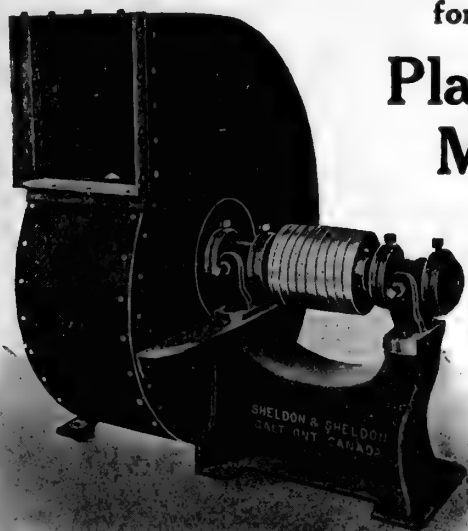
Canada Machinery Corporation, Limited

Galt, Ontario

Largest Builders of Wood-Working Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

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Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

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Messrs. Walker's Limited, 259 Stanley St.
Winnipeg, Man.

Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.

Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbings (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and **CARRIAGE** entirely, raise your cutting capacity, and install economy by the same stroke.

Not an **EXPERIMENT**, but an **ECONOMIC NECESSITY**.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."

Wickes Brothers

410 White Building - - SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

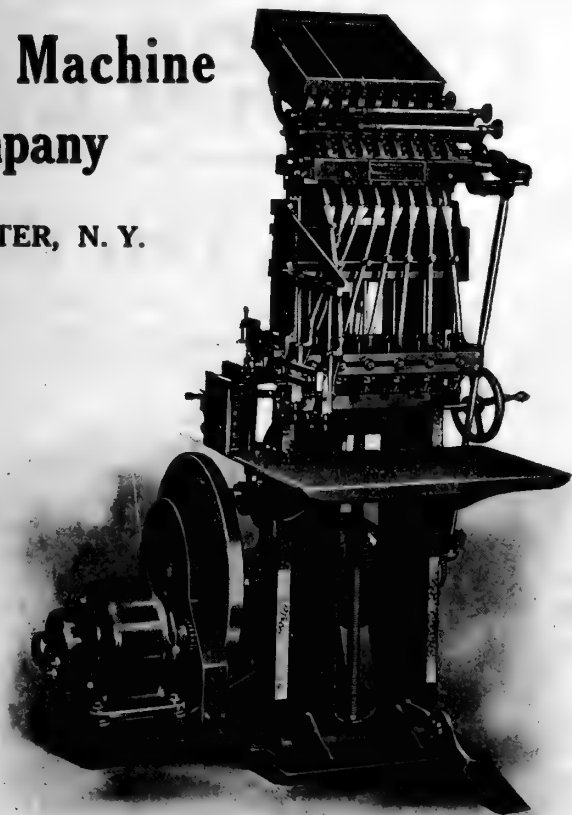
Manufacturers
of—

Nailing
Machines,

Lock Cor-
ner Box
Machinery,

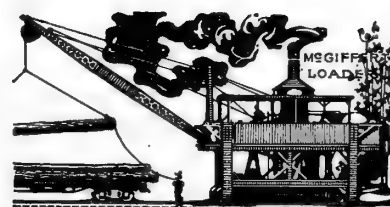
Box Board
Matchers,

Box Board
Printing
Machines.

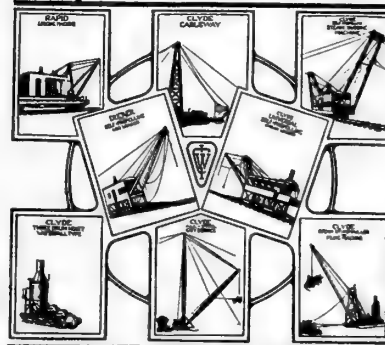


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.

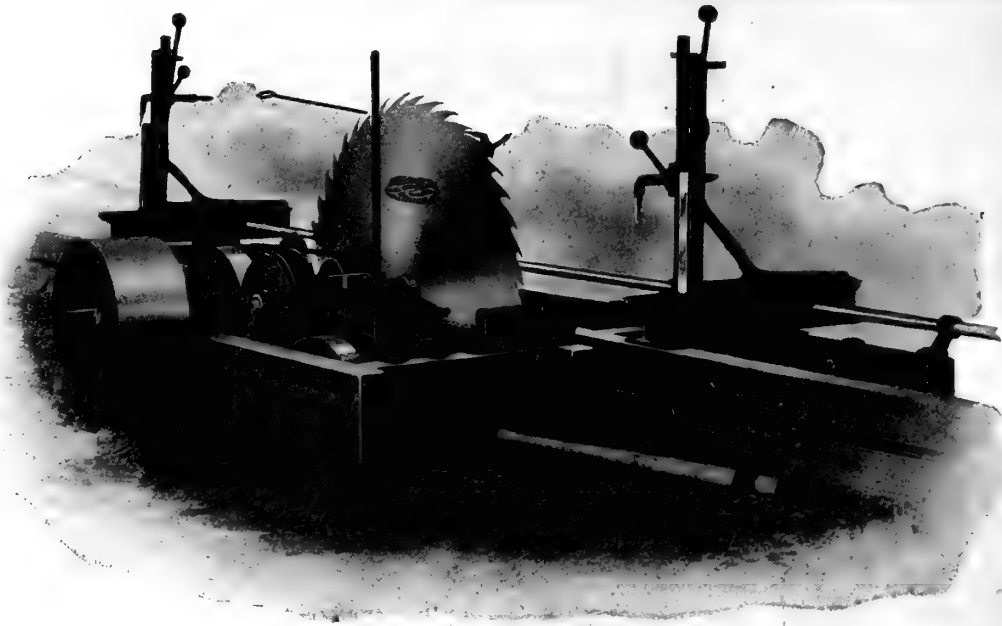


A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.



Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

Size "S" Single Mill with 16-foot Carriage

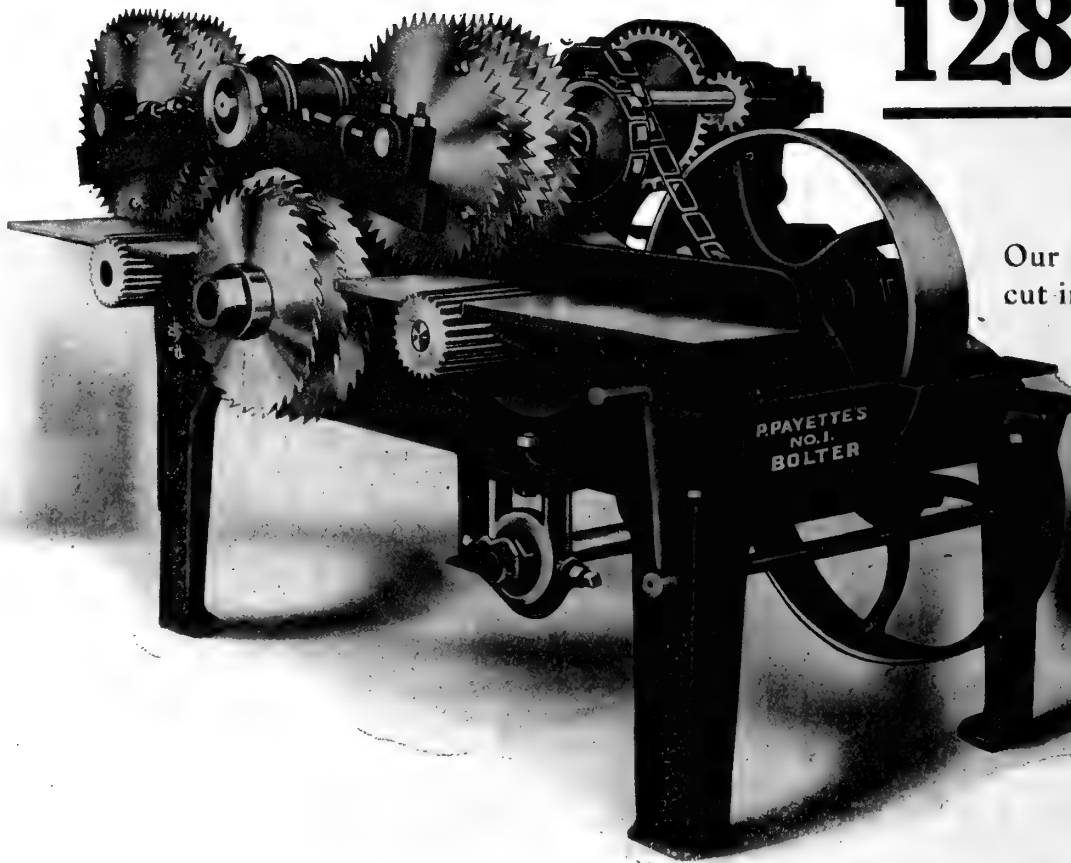
Size Husk 3 feet by 6 feet 3 inches
Diameter and Length Mandrel . . 2 3/16 by 55 inches
Size Drive Pulley 20 by 10 inches
Feed per Revolution of Saw 0 to 3 1/4 inches
Feed Belt 4-inch Gandy
Largest Diameter Saw 56 inches
Length of Carriages 12, 16, 20 or 24 feet

Width of Carriages 33 inches
Trucks 7-inch wheels and 1 1/4-inch axles
Length Track 32, 40, 48 or 56 feet
Style and Opening of Blocks C1-36 inches
Style Mill Dogs Pony Excelsior
Style Set Works No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw wrench, cant hook, feed belt, pulley with boxes or tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C. E. Long Mfg. Co., Orillia, Ont.



128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1 1/2 in. by 3/8 in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.

A Few of the "400" who use Payette's Lath-Machinery :

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.

P. Payette & Company,

Engineers and Machinists

PENETANGUISHENE, ONT.

ON Berlin
Band Saw-
ing Machinery
Are Improve-
ments You Can-
not Buy Else-
where at Any
Price.

THERE'S A BERLIN BAND FOR EVERY PURPOSE

The Berlin offers you the most complete line of Band Sawing Machinery in the World. Whatever rip or resawing you want to do, in any branch of woodworking, there's a Berlin especially adapted to your conditions.

Most Band Saws represent the ideas of one designer. Berlin Bands combine the practical ideas of millmen from every section of the country with the scientifically worked out designs of Berlin Engineers.

Our men learned the weak points of Band Resaw design and construction from personal observation in mills and experience with the machines in operation. Then, with the co-operative help of men of long experience on Band Sawing problems, they designed the machines that give the service demanded.

This is why mills from coast to coast are installing Berlin Bands exclusively. They value the completeness with which the various Berlin Bands cover every working condition. "Berlin" service is the service they're after. It builds up their profit.

Let us prove that Berlin Bands will insure you a bigger profit. Operate a Berlin side by side for one month with a Band of any other make. Decide in favor of one that proves easiest to operate, requires the least power, the lowest upkeep, and does the best and most work at the lowest cost.

It's a Berlin!

Berlin Bands Give Results

Berlin Bands are built for lifetime service. They embody improvements you cannot buy elsewhere at any price. The base is a one piece casting. The upper wheel is constructed entirely of steel with staggered steel spokes and weldless steel rim. The lower wheel is cast of special iron with hardened face. Both wheels are accurately ground and balanced. The rolls are set by a quick, accurate set works, and powerfully driven through a variable speed device by wide, open belts. A knife-edge straining device protects blades from excessive strain.

Each Berlin Band is built with care and accuracy. It costs us more to build such machines, but they are the cheap-

est for you to use. Cheaper because they will consistently produce more and better work, day after day, year after year.

The Band Saw Book illustrated above tells all about Berlin Bands and offers practical suggestions for increasing your profits. "Fitting and Operating" will help your fitter. "Turning State's Evidence" shows what your neighbor users think of Berlin Bands.

Use your letterhead in sending for these books. The edition is limited.

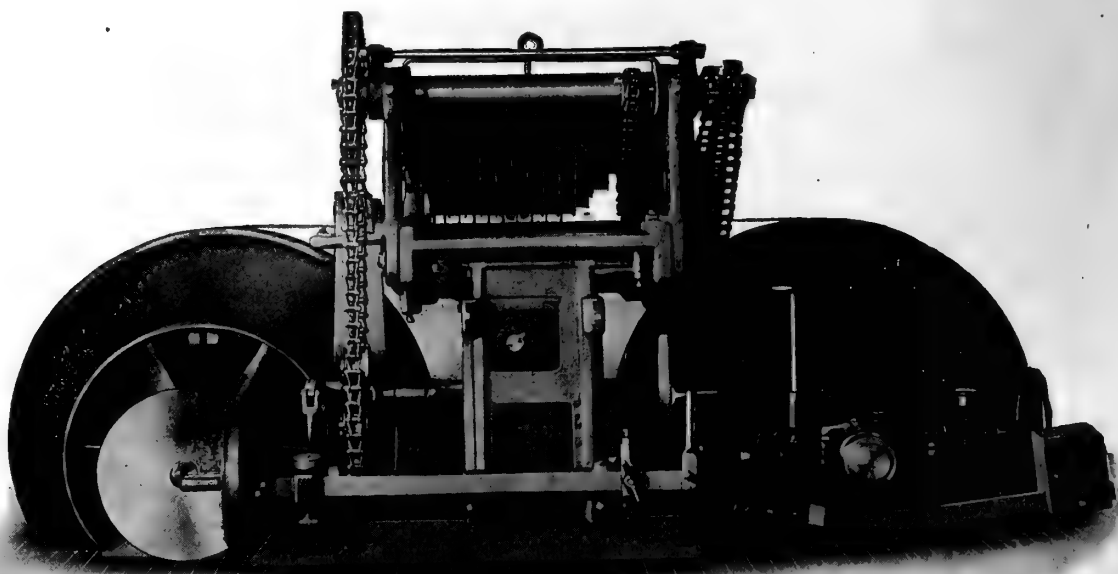
BERLIN MACHINE WORKS, LIMITED, Hamilton, Ontario

Largest Manufacturers of Woodworking Machinery in the World

United States Plant

Beloit, Wis.





Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

LOGGING LOCOMOTIVES



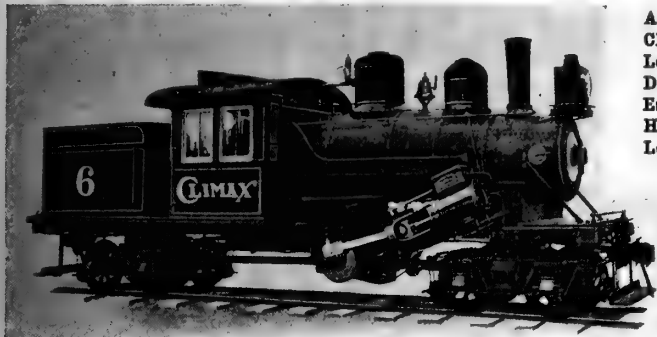
The locomotive illustrated was built for MacKenzie, Mann & Co., Contractors, Montreal, Canada, and represents the latest development in this type of locomotive.

It is suitable for logging contractors, quarries, mines and industrial service. It will haul 1,875 tons on level, and 160 tons on 3 per cent. grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

MONTREAL LOCOMOTIVE WORKS, LTD.

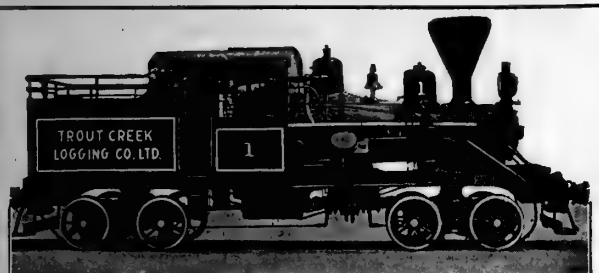
Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Engine being operated by the Trout Creek Logging Co., Ltd.
of Trout Creek, Canada

Especially adapted
for heavy hauling
on steep grades,
sharp curves and
uneven tracks. For
logging, switching
and pulling on main
lines, mills, fur-
naces and indus-
trial purposes.

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

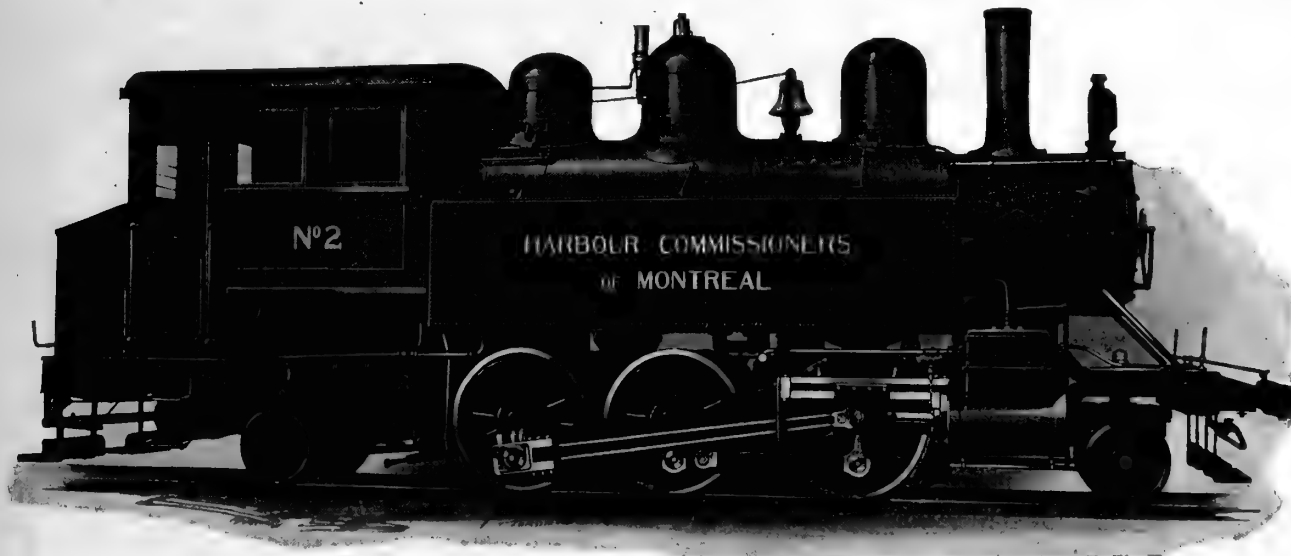
Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**LOGGING LOCOMOTIVES**

THE knowledge and experience of fifty years in locomotive designing and construction is what you get in our Logging locomotives. They are specially constructed for logging operations and will stand up to the severe service in which they are expected to run.

They are as carefully designed and built as our 200-ton locomotives. Repair parts may always be obtained on the shortest notice.

May we send you Specifications?

Canadian Locomotive Co., Limited, Kingston

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

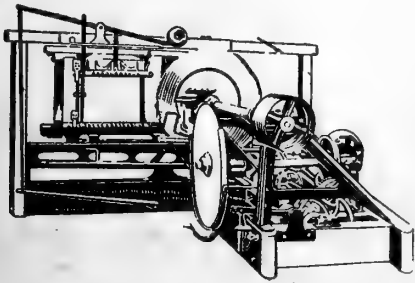
Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

The Pioneers

We alone manufacture the Genuine "DUNBAR" Shingle Machines—other machines advertised as such are imitations.



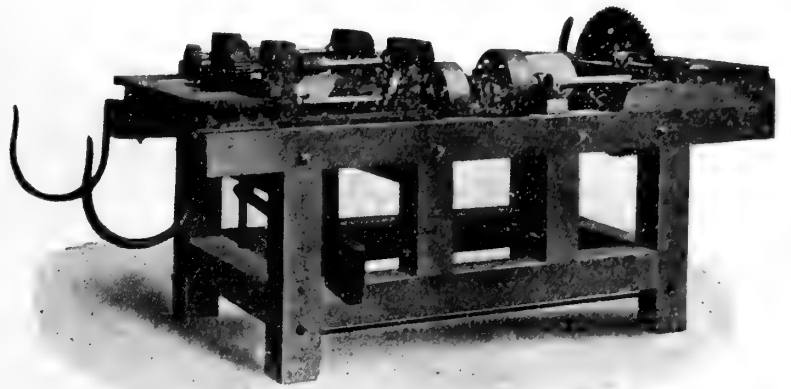
Operating our "Dunbar" Shingle Machine one man will joint and sort from 16 to 45 thousand shingles in a day of 10 hours. Good shingles too.

We are Canada's Pioneer Shingle Machine Manufacturers, and we respectfully solicit correspondence from lumber manufacturers.

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson Mfg. Co.

Fredericton, N. B.



Lath Mills

There is much waste in every mill that can easily be manufactured into lath by our improved lath mill.

This machine is inexpensive in construction yet capable of turning out the very best work.

Get our prices and literature.

Maritime Foundry & Machine Wks.

Limited

Chatham,

New Brunswick

THE PETER GERLACH CO.
MANUFACTURERS
AND BUILDERS OF

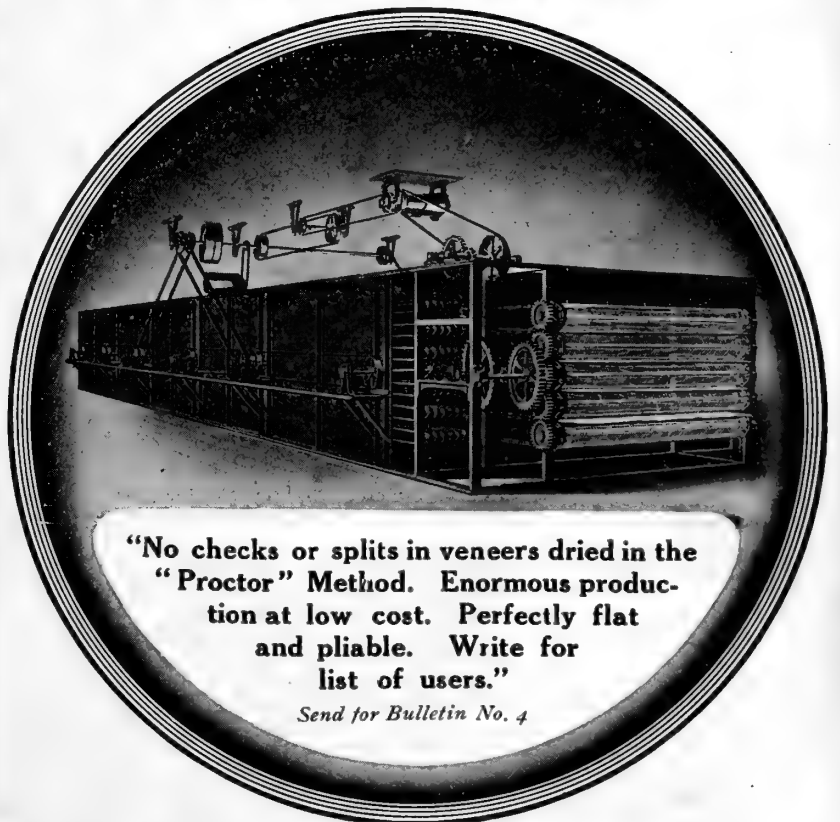
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CIRCULAR AND CYLINDER
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TOOLS
SAW AND LOGGING

For the Manufacture of the Following

STAVES	HEADING
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CHURNS	FREEZERS
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COMPLETE PLANTS
FOR THE MANUFACTURE OF
BARRELS, KEGS, STAVES AND HEADING
OUR SPECIALTY.
FOR PRICES AND FURTHER PARTICULARS,
ADDRESS
THE PETER GERLACH CO. CLEVELAND, O. U.S.A.

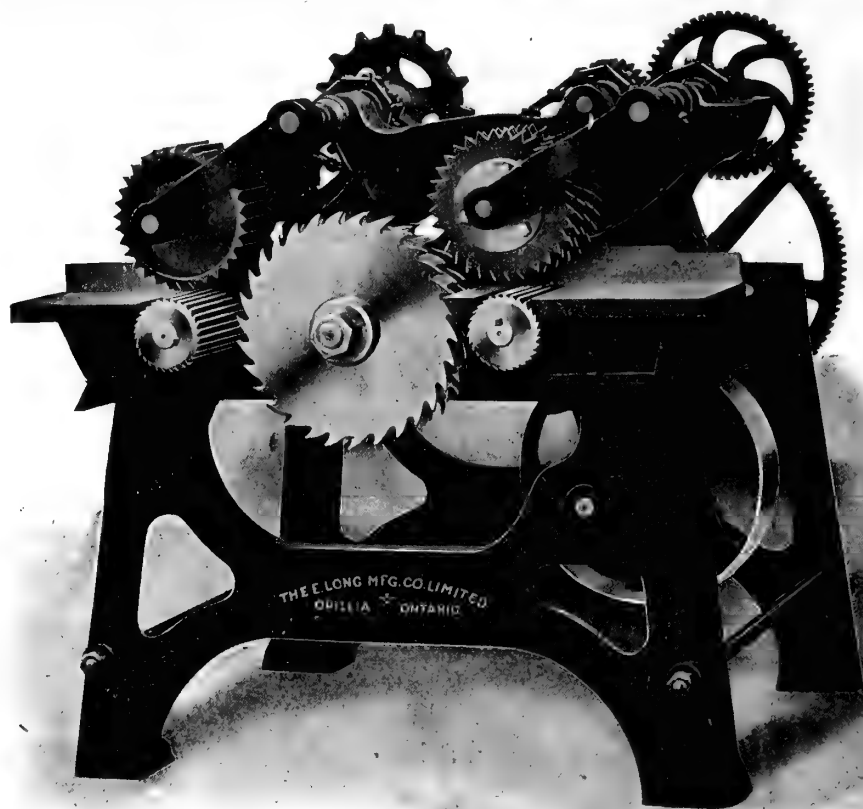
"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the "Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

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Lath and Picket Machines

A pair of moderate priced machines suitable for cutting lath, strips, or pickets.

Some of the special features of these machines are—

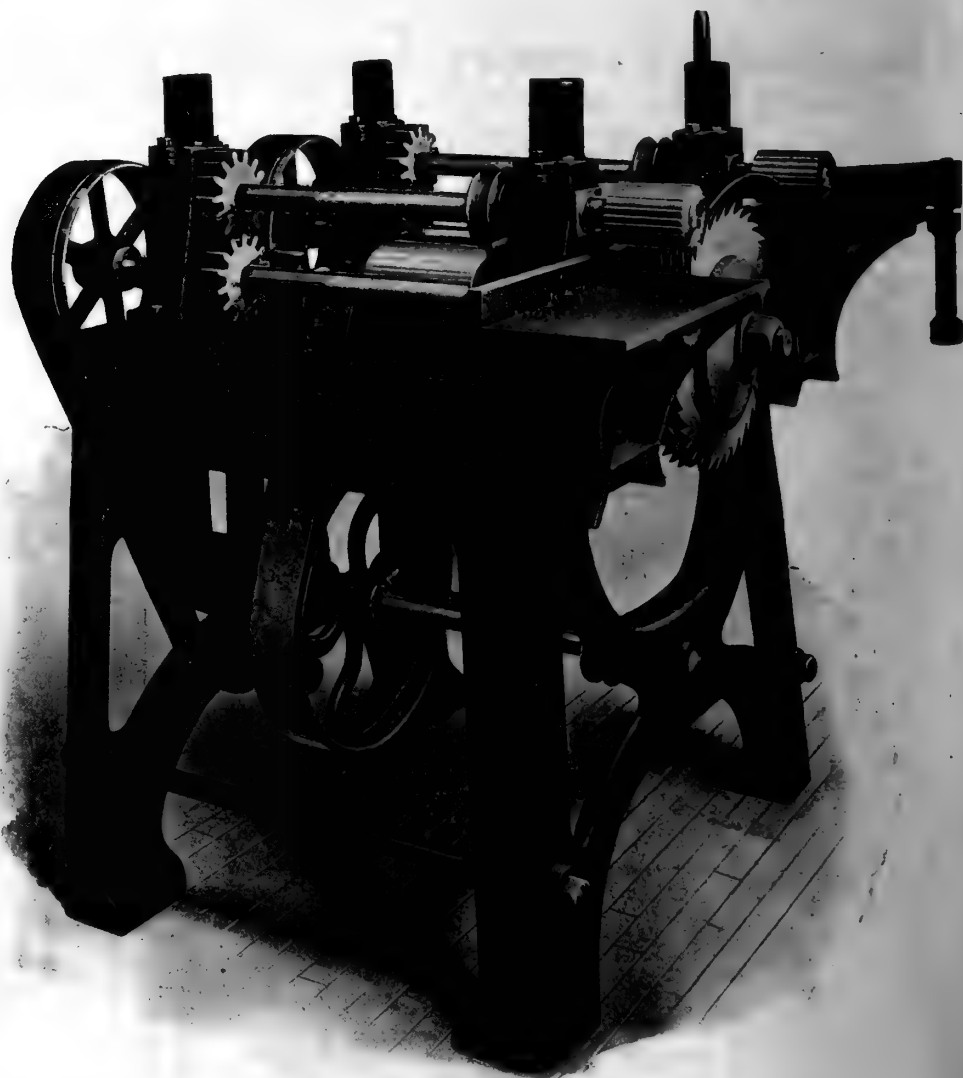
Safety in operation

Modern design

Compact and rigid

**Inexpensive
installation**

Maximum output with a minimum expense.



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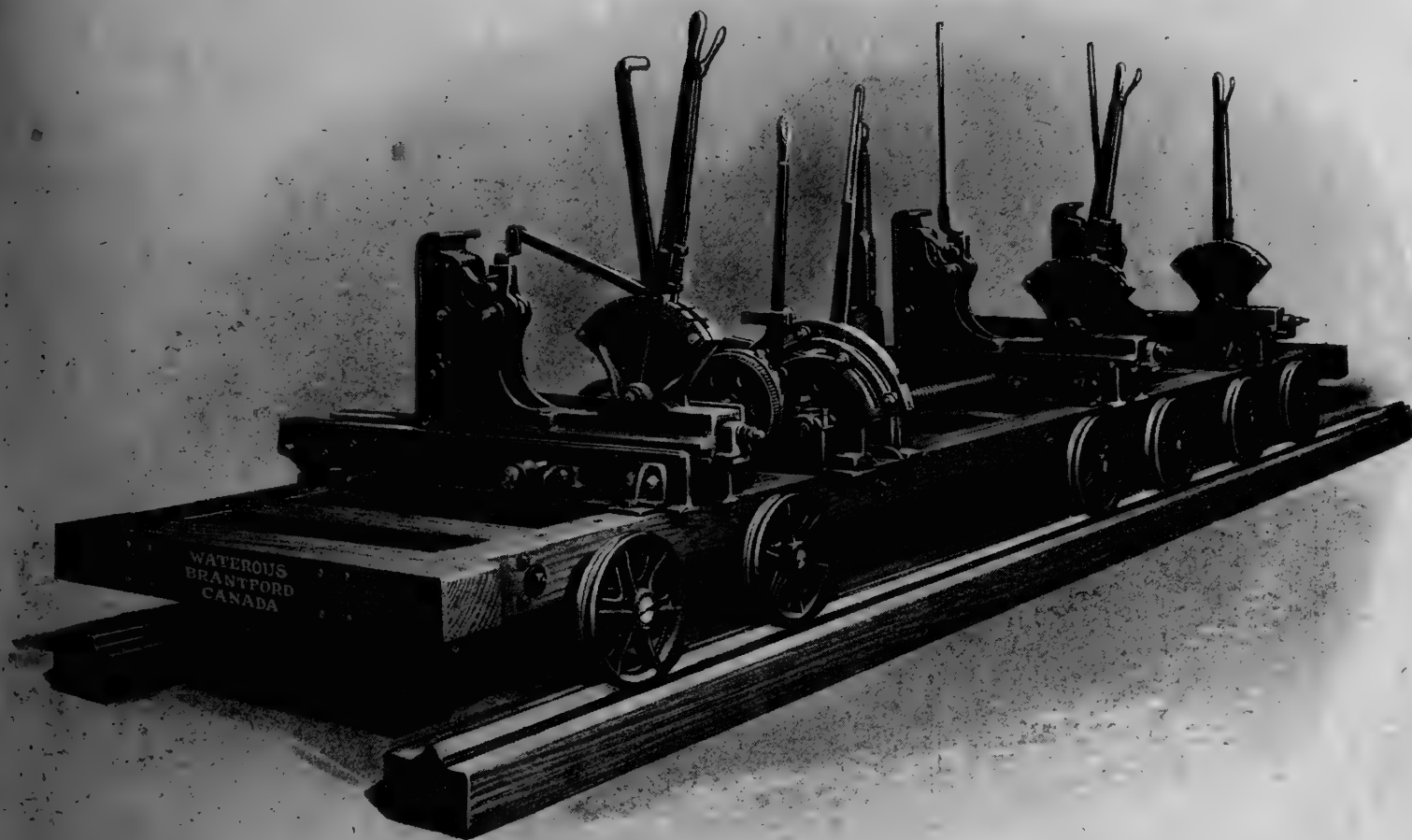
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THAT'S
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25% More Weld = 25% More Strength = 25% More Wear

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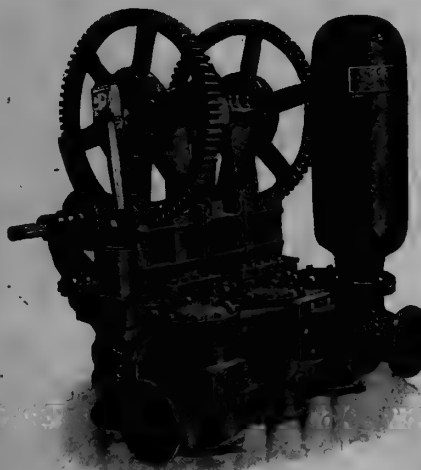


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"Weldless Steel Chain"



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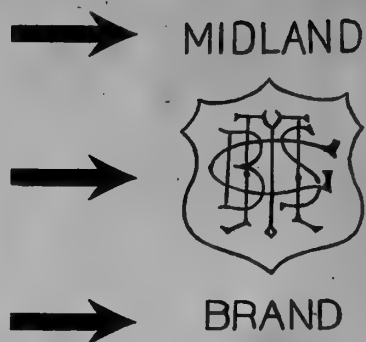
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MONTREAL

Midland Planing Mill Products

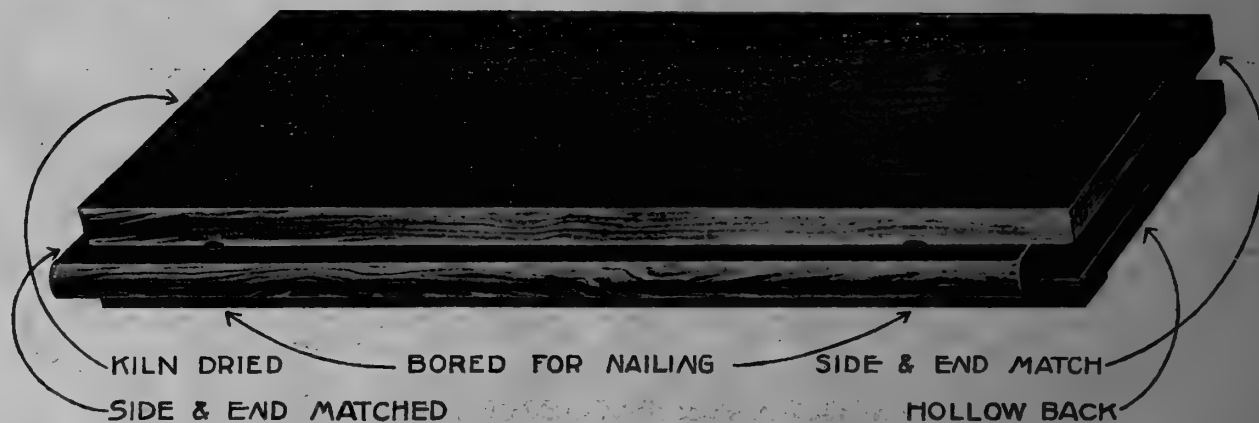
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Selected Red:—Has one face clear of all defects and is selected for color. Lengths 3 ft. to 16 ft.

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Flooring is measured $\frac{3}{4}$ in. over face.

13/16" Flooring Standard Widths are $1\frac{3}{4}$, $2\frac{1}{4}$, and $2\frac{3}{4}$ in. face.

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PRICES:	13/16 Selected Red, Standard Widths.....	\$54.00 per M.	9/16 Selected Red, Standard Widths.....	\$44.00 per M.
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Prices above are F.O.B. Cars, Midland.

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Manufacturers from the Tree to the Finished Product

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2	"	5/4 x 5 x 10/16	"	"	"	"
4	"	5/4 x 6 x 10/16	"	"	"	"
4	"	5/4 x 7 x 10/16	"	"	"	"
2	"	5/4 x 8 x 12/16	"	"	"	"
1	"	6/4 x 4/7 x 10/16	"	"	"	"
4	"	6/4 x 8 x 12/16	"	"	"	"
4	"	2 x 4/7 x 12/16	"	"	"	"
4	"	2 x 8 x 12/16	"	"	"	"
1	"	5/4 x 8 & up x 10/16		Box	White	Pine
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With our mill running day and night we
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70 M 2 x 4" 10'/24' (25 per cent. 10 & 12')
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 100 M 2 x 8" " (60 per cent. 4 to 18')
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 About 50 per cent. No. 1 and No. 2 Dim. each.

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Large stock of 1" 1 1/4", 1 1/2" and 2" WHITE
PINE, Bone dry.

10/13-ft. Spruce and Hemlock

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Timber for R. R. Construction and
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Bromley can submit attractive prices.

Real choice red and white pine stock.

Odd lots go at bargain prices.

Mississauga reserve timber—my stock.

Largest orders filled promptly.

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Dry Factory White Pine—All thicknesses.
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Manufacturers of
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Planing mill in connection with saw
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5 Cars 1 x 6 to 12", equal proportion of each
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**White and Red Pine
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SPECIALTY: Dressing of wood
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*Let us quote you on the
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10,000 Ft.	4/4	1st and 2nd Basswood
100,000 "	5/4	" " "
40,000 "	6/4	" " "
2,500 "	8/4	" " "
2,500 "	16/4	" " "
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11,000 "	6/4	1st and 2nd Brown Ash
2,000 "	16/4	" " " "
12,000 "	8/4	" " Soft Elm
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48,000 "	4/4	No. 1 " Soft Elm
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F.O.B. 8c rate to Toronto.

Good Average Width and Dry.

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10 Cars 1 3/8—4 Ft. M. R. Pine Lath

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OTTAWA, ONTARIO
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 All Sizes and Grades

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 All stock sized or matched if required.

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Best Stock for Factory and Pattern Lumber

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Why not improve it?

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Operated by one man.

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Is quick, light and reliable.

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B. C. Red Cedar Shingles

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☐ Place your announcement on this page regularly. It will not only reach your present and prospective customers oftener than your travellers, but will also stamp Toronto as a big lumber distributing centre.

☐ You cannot bring your name too often before lumber buyers. Let this paper do it for you constantly and effectively.

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OUR New Mill commenced operating on January 5th, and is now running steadily. We started double tower, that is running night and day, on January 15th.

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Repaired and Recovered **Limited**

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We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

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- 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
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 - 1 Double cylinder steam nigger, right hand.
 - 1 Log Loader for right hand mill.
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 - 2 2-saw trimmers.
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 - 1 Edger for ripping dry lumber, installed.
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- There is also a large quantity of shaft-

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- 1 Automatic Filing Machine for 12-in.
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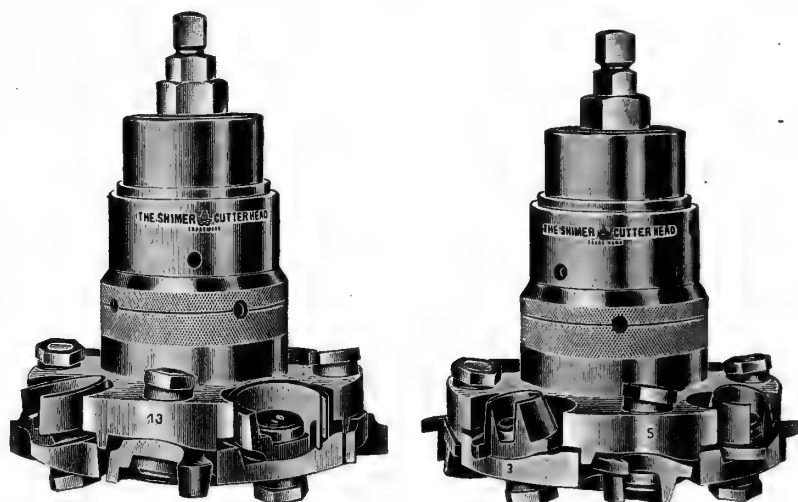
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The operator, owner and consumer all derive profit and satisfaction from the Shimer Cutter Head. The operator is pleased because the Heads have a "make-ready" built into them which relieves him from the cares of "fitting and trying." The owner gets satisfaction out of the fact that the output is increased and the work raised in quality. The consumer gets material which goes into place with less labor and expense and presents a better appearance when finished.

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5 cars, 4/4 1s and 2s.
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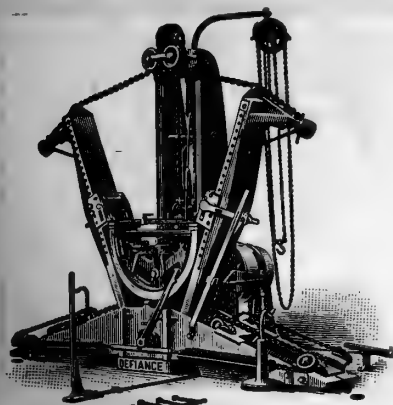


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12" Felloe, Hound and Bow Bender.

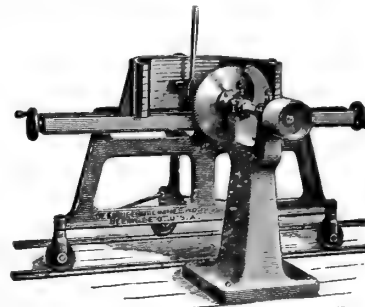
Designed to Meet all the Requirements for Economical Wood Bending.

We have given much time and attention to this special industry. The machines we have built for bending all classes of wagon and carriage rims and bows have proven highly satisfactory in the many locations in which they have been placed.

The "Defiance" 12" Felloe, Hound and Bow Bending Machine shown herewith will bend hard wood as large as 5" thick, 12" wide with adjustments sufficient to accommodate changes from 16" to 72" circles.

The No. 2 Improved Rim Packing and Cut-off Machine also illustrated herewith will receive the rims or bows after they are bent, and when placed in position, the carriage holding them is moved to the saw and the surplus ends are cut off, making them all register alike.

These two labor-saving machines will meet your demands and we should be pleased to receive your request for further information and price.



Rim Packing and Cut-off Machine.

The Defiance Machine Works, Defiance, Ohio, U.S.A.



MAPLE LEAF SAWS

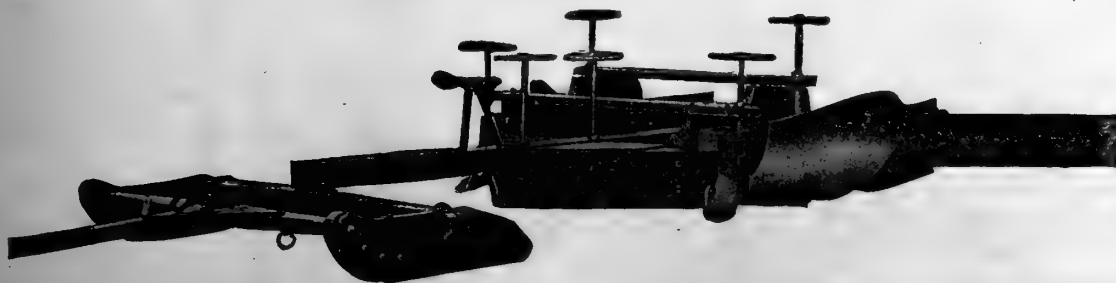
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The Standard Tools



Finest Quality

Split Maple

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Peavey Handles

Carload or dozen

Boom Chains

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Skidding Tongues

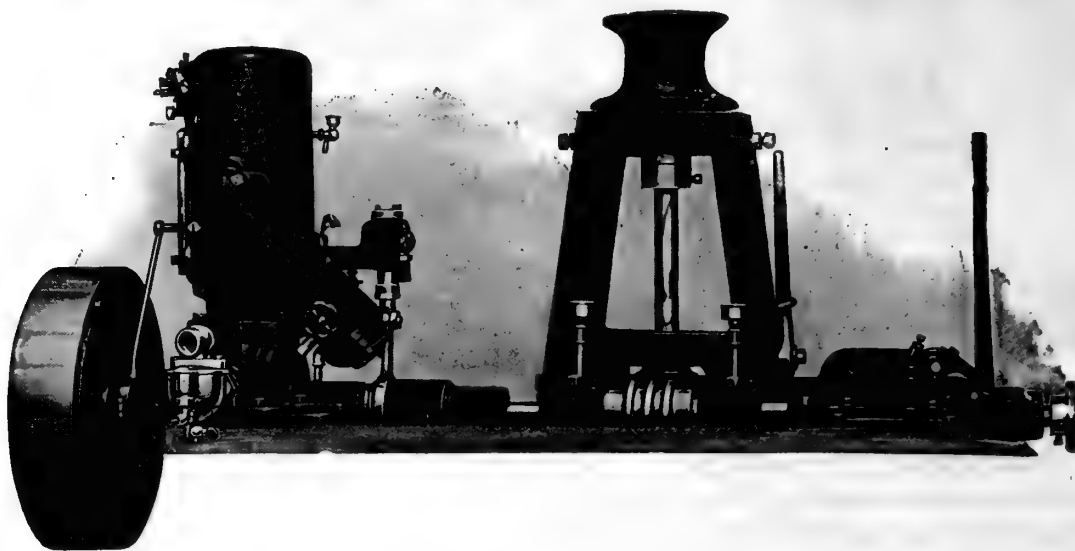
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Adams Pointers do the work of from six to ten men. One man operates all machinery.

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Adams Pointers can be used for warping and sweeping logs out of corners that an Alligator could not reach.

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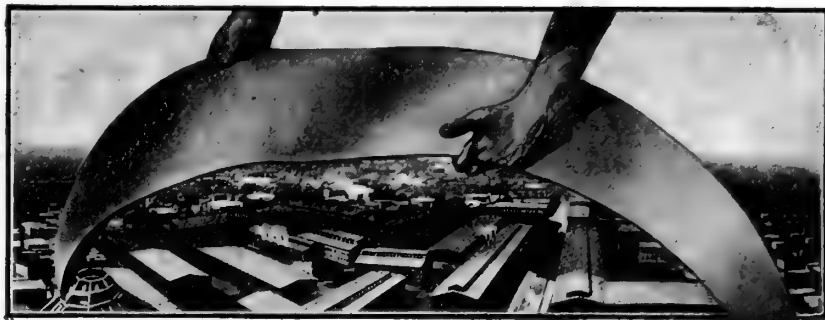
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We can do dressing, matching and re-sawing. Place your orders this way and save freight.

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Other dealers have literally roofed entire communities with this roofing—and so can you!

The superiority of J-M Asbestos Roofing over all other ready roofings is so apparent that it virtually sells itself. And furthermore, every customer becomes a booster for you—with the result that additional sales are sure to follow.

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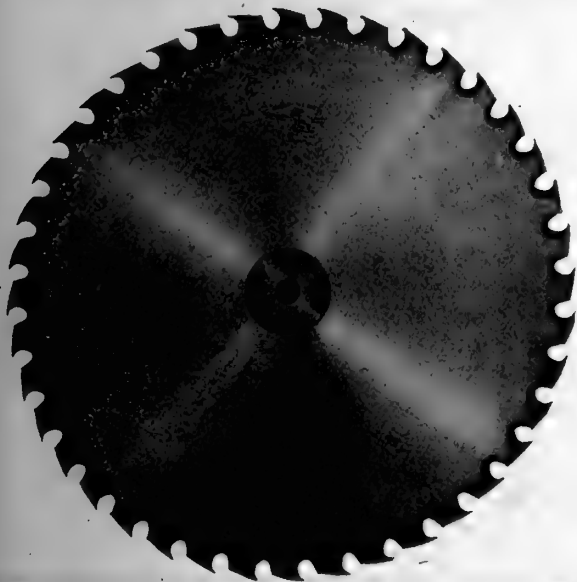
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1x7	1½x5	1½x10	2x7	3x5	3x10	1x8
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Clothe You
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EVERY garment necessary for a lumberman's complete outfit is included in the old reliable "ARC" Brand Clothing. As the illustration says, we could take you into our factory and clothe you for zero weather.

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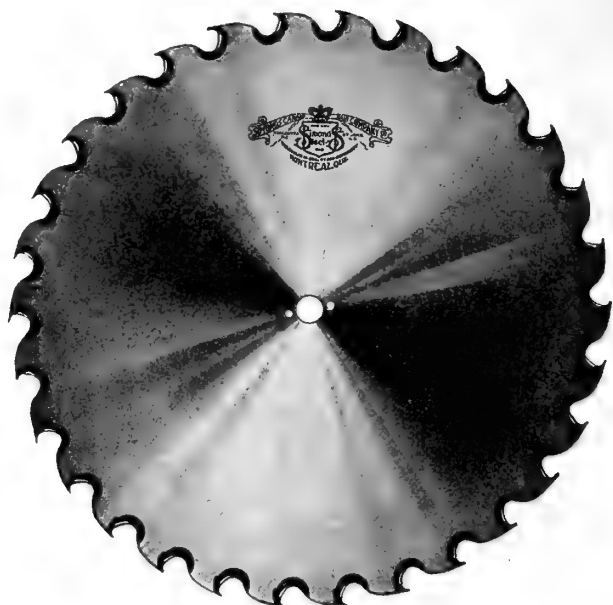
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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B. C.'s New Timber Royalty Act

The introduction of the new timber royalty act by Hon. W. R. Ross, Minister of Lands for British Columbia, is looked upon by the lumbermen of that province as the most important event in connection with legislative matters relating to the lumbering industry that has taken place for many years. Briefly, the new act is expected to give to the lumbering industry that measure of stability which it has lacked for so many years, and which is expected to enable it to attract capital from Great Britain and other countries. In 1909 the government of British Columbia passed a special licence act. Previous to that date licenses had only been renewable for twenty-one years. This act made them renewable in perpetuity. The object was to provide stability for the industry, so that it could attract capital. Unfortunately however, the lumbermen of the province found that their special licenses, although in many cases millions of dollars had been invested in them, were of practically no value for financing. After an agitation of several years the lumbermen have now succeeded in persuading the government of British Columbia that it is imperative to fix rentals and royalties also, for a sufficient term of years to afford reasonable stability. This is the purpose of the new "Forest Act," or rather of an amendment to the "Forest Act" which was introduced by the Minister of Lands recently, fixing the rentals at the coast at \$140 a square mile and the rentals in the mountain district at \$100 a square mile, the latter being a reduction of \$15 per square mile. These rentals are definitely fixed as the maximum for a period of forty years commencing in 1915.

The royalties are fixed for the same term on a profit sharing basis. Small increases become effective in 1915 and the rates thus established are to remain stationary for a five-year period. Then there will be a readjustment for five years and other readjustments every five years subsequently, until seven five-year periods have passed. The readjustments will be based upon a sliding scale in which it is provided that the crown shall participate in the profits if the average wholesale selling price of lumber exceeds \$18 per thousand feet.

That the introduction of these measures is being received with considerable satisfaction by the lumbering industry in British Columbia is indicated by the opinion of Mr. W. A. Anstie, of Revelstoke, B.C., managing director of the Forest Mills of British Columbia, who, during a recent visit to Toronto, expressed himself favorably in regard to the new legislation. Some of the timber holders and manufacturers of British Columbia, he said, might feel disappointed that the government had not seen fit to meet the demand for more substantial reductions in rentals. Still he felt that the majority would agree that the measure of stability afforded by the new legislation would more than compensate for any lack of reduction in rentals and that the timber interests on the whole would be satisfied with the situation.

The B. C. "Saturday Sunset," in a recent issue dealing with this situation from another point of view said: "A feature of great interest and considerable felicitation is the renewed interest in the timber market. Since 1911 but few blocks of timber have changed hands, and prices have shown a disposition to sag, particularly in the unsettled state of royalties and dues, the subject of which is being investigated by the province with a view to increasing them but at the same time determining on a policy which shall hold for a long term of years. Several blocks have changed hands during the past three weeks, and there is a persistent enquiry chiefly from across the line, with a considerable number of actual buyers already in the city.

"It is felt that the advent of the opening of the Panama Canal this summer and the larger market this will afford will accrue to the benefit of the holder of British Columbia timber. The real reason lies a little deeper. President Wilson has thrown the entire weight of his position and steadily growing influence toward the repeal of the free toll provision for American bottoms through the Panama Canal. While the repealing act will be fought very bitterly in both houses this spring, because a great portion of the business community is against it, it seems likely to be successful. The free toll provision of the Panama Canal act passed last year, which was protested by Great Britain, acting for herself and other shipping countries as an evasion of the Hay-Pauncefote treaty was ostensibly passed on the arguments that it was a bonus to American shipping from and to American ports and since shipping was at very low ebb something ought to be done to stimulate it. Then, since no foreign ship could trade between American ports, foreign shipping was being denied nothing, and the question in the words of ex-president Taft was a "local question," and could admit of no arbitration, and at the same time was no evasion of treaty rights. These were the ostensible reasons for the passage of that provision. The true reason lies in business. It has been stated frequently that the Weyerhouser and the timber interests of California and the Pacific Northwest of the United States wrote the plank in the Democratic platform, and were responsible for its enactment into law. The advantage to the lumbering industry of Washington, Oregon and California is manifest. With a differential of \$1.50 per ton, the Canal dues, in favor of timber from those states against the timber in British Columbia means a safe market along the Atlantic seaboard with competition from this province for a number of years acting under that bill, dead, except such of a local character between American operators. It was affirmed that the passage of that act meant one hundred million dollars into the pockets of the Weyerhousers, and a like proportion to the other timber holding interests. It is easy to see that the loss of this potential wealth will not be given up without a fight."

Solving the Waste Problem in B. C.

The problem of utilizing what is generally known as waste timber and waste lumber, in connection with the logging and lumber manufacturing industries of British Columbia, presents all the well-known difficulties which have always affected these industries in districts where the production is largely for export markets. Wherever a lumbering country has insufficient population to provide markets for the output of its forests, the waste problem is exceptionally difficult. As population increases, new uses are found for the less valuable portions of the tree which formerly could not be marketed. British Columbia with its progressive forest administration, and with

the advantage of the experience of other countries which have had to face the same difficulties, is doing much to lessen the waste involved in these industries. An interesting outline of the situation is contained in the report of the Chief Forester for the year 1913, which has just been published, in the course of which he says:—

It must be admitted that there is less progress in British Columbia in the utilization of waste timber for the manufacture of by-products than elsewhere in Canada. The complete utilization of timber is only possible where stumpage is valuable, labour is cheap, and there is a large buying population which can be reached without excessive freight rates. These conditions do not yet exist in British Columbia; consequently, only a small proportion of the forest can be marketed, and large quantities of timber are left in the woods or sent to the burners because no profitable use can be made of them. Nothing can be accomplished here on a commercial scale approaching the complete utilization effected in Europe and in some parts of Eastern Canada. High freight rates prohibit the shipping of small wooden articles away from the Province; the local population does not create a demand which cannot be more cheaply supplied from elsewhere, and even if a demand did exist for articles which could be manufactured from what is now termed waste, it would be cheaper to buy good logs than to gather up the inferior material now left in the woods or sent to the burners. Clean logging and complete utilization will therefore come slowly in British Columbia. At present the most complete utilization in the Province is in the Crows Nest Division of the Cranbrook District, where green and dead material down to 3 inches in diameter and 3 feet long is taken off for use in mines.

Nevertheless, the lumber manufacturers of British Columbia have by producing lumber in odd and even lengths and widths saved a great deal of high-grade lumber, and have set an example in close utilization to all other lumber-producing districts on the continent.

Another common form of saving waste is the taking out of cedar for shingle-bolts and posts. The market for these commodities is increasing, and it may be confidently expected that hereafter very little cedar will be lost. On the Coast the pulp-mills use large quantities of hemlock which, under market conditions, could not be utilized for lumber manufacture and would otherwise be left in the woods to rot. An unsuccessful attempt was made to market hemlock-bark, but the cost of preparing it was found to be too great. The coal-mines of the Prairie and Crows Nest District provide a steady market for material too small to put into lumber. Aside from the instances quoted, logging operators west of the Cascades leave nearly everything in the woods that will not produce a No. 2 or good No. 3 log. Utilization east of the Cascades is much more close, and compares favourably with conditions in Eastern Canada.

The chief market for sawmill refuse is found in fuel, which production is an important side-line of every sawmill in or near a centre of population. The market for this in 1913 was (because of the coal shortage) better than ever before, the sale being estimated at 300,000 cords, valued at \$900,000. Large quantities of sawmill refuse are also used under burners to produce power; and in addition the manufacture of sawdust briquettes for fuel purposes has been started. These appear very satisfactory and sell for the same price as coal.

An outlet for the use of sawmill-waste may be found in the manufacture of sulphite pulp. A 40-ton plant has been erected in connection with a sawmill at Marshfield, Oregon. This plant, if it proves successful, may cause the utilization of similar material in British Columbia.

A study of the wood-using industries of the Province is now being made by the Forest Branch. The results will be published in such a manner as to make known the importance of these industries, and to suggest, if possible, new markets for materials now unused.

What Regulates Waste Utilization?

"Closer utilization of timber" is the subject of an article published in the February issue of "Conservation" issued by the Canadian Commission of Conservation. "Popular opinion holds the lumbermen responsible," says the article "for the wastage of 50 to 75 per cent. of the timber which he handles, this waste consisting of high stumps, broken trees, logs and uncut timber left in the woods, and of sawdust, slabs, edgings and trimmings at the mills. The lumberman maintains that he saves as much material as he can at a profit, and that he should not be charged with wilful waste when he refuses to handle material which cannot be sold for at least the cost of production.

"Conditions which make possible closer utilization in logging and manufacturing are:

1. Ready markets.
2. Cheap transportation.
3. Character of timber.
4. Efficient management.
5. Proper equipment.

"The labour costs in handling waste material are often prohibitive. The present low price of stumpage makes it more profitable for the manufacturers of many small wooden articles to buy logs, and entire timber tracts, than to manufacture from the waste of lumbering operations."

These are facts with which lumbermen are all familiar, with the exception of the last statement, to the effect that the present low price of stumpage makes it more profitable for the manufacturers of many small wooden articles to buy logs and entire timber tracts, than to manufacture from the waste of lumbering operations. Just what this statement means, is difficult to understand, but if it means that manufacturers of small wooden articles are in the habit of buying tracts of timber to secure their raw material, it is scarcely accurate. Nor is it right in making the general statement that the present low price of stumpage is the cause of such a situation. Take the price of stumpage in Ontario to-day, for instance, and the case seems to be very different. Far from being at a low price, stumpage in Ontario

to-day is so expensive that many of the large manufacturers in the Georgian Bay district have decided, during the last year or two, to cease their operations, or to reduce them greatly. It is a generally acknowledged fact that stumpage in Ontario to-day is so high in price that the competition of other classes of timber and lumber, especially the products of the Southern States, is making it difficult to manufacture in Ontario at a profit. There are other factors, of course, which are playing a part in this situation, but it is not proper to lay the blame at the door of cheap stumpage.

In some of the provinces of Canada, particularly British Columbia, the working out of these factors is quite apparent and it is true that over-production has been stimulated by cheap stumpage, or rather by stumpage which is readily available and cheaply logged. In such a country, the manufacturing of small articles from waste is not practical. In Ontario, Quebec, and the Maritime provinces of Canada, however, statistics which have been published recently by the Forestry Branch of the Department of the Interior show that the chief factor in this problem of the utilization of waste is the proximity of markets, not the price of stumpage. Throughout Eastern Canada good progress is being made in using up material which formerly used to be sent to the burner, and the reason in every case is, that markets have been found, close enough, to make the process profitable. Low price of stumpage is only a coincident condition, resulting to some extent from the absence of markets. An artificial increase in the price of stumpage, for instance, would be of no avail in increasing the utilization of waste. It would simply make the holding of timber that much more expensive for the time being, unless it was accompanied by profitable manufacturing conditions growing out of the proximity of better markets.

Those who wish to see the closer utilization of waste must devote their attention more to the study of neglected opportunities for using up material which is now wasted, and to bringing manufacturers into closer touch with profitable markets. The step recently taken by the Forestry Branch of the Department of the Interior, in the direction of undertaking an exhaustive series of tests of Canadian

woods and studying the various uses to which each can be put, is along the right direction and is certain to have good results.

The article referred to above concludes as follows:—"Many by-product plants require such large investments and an assurance of a long-time supply of material that their erection is possible only in connection with very large lumbering operations. The conditions surrounding many small operations are such that close utilization is impossible.

"Material is saved only as it is valuable. Closeness of timber utilization is in direct proportion to stumpage values. In some large and favorably situated Eastern lumbering operations, high timber values and good markets for a wide variety of products permit the utilization of practically all waste. In many Pacific Coast operations

where standing timber of low value is abundant, and sawing capacity is in excess of market demand, much waste is at present unavoidable.

"Over-production of lumber and other wood products is a prolific cause of forest waste. Over-production results from unlimited competition in the exploitation of forest resources.

"Educating the consumer to the use of grades and sizes of material now rejected will accomplish much in decreasing forest waste. The consumer has the final say in the disposition of the products of the manufacturer. This is not a condition peculiar to lumbering alone, but applies to the market for all manufactured and agricultural products. A market for forest products equal to that in Germany would result in as close timber utilization in Canada as exists in Germany."

Ohio's Woodworking Industries

A bulletin upon the wood-using industries of Ohio, has been published by the Ohio Agricultural Experiment Station in co-operation with the Forest Service of the United States. The report is chiefly interesting on account of the wide variety of uses to which it shows that lumber is put in the State of Ohio. Nearly every State in the Union as well as many foreign countries send some portion of their forest material to Ohio for utilization in manufacture. The value of the commodities turned out by these factories, together with the value of the rough forest products, like lumber, shingles, cross-ties, etc., amount in one year to nearly \$156,000,000.

There were more than 1,900 sawmills operating in Ohio in 1860. This number was steadily maintained for several decades, when the failing timber supply began to be felt and the larger mills were compelled to move to other regions. In 1910, 1,532 mills were still operating in Ohio. These were mostly portable mills of small capacity. Their combined cut was 542,000,000 feet, as against 990,000,000 saved in 1900, a decrease of more than 45 per cent.

Over 63,000 wage earners in Ohio are dependent upon the wood-using industries and sawmills. These establishments, aside from the sale of the raw material, added to the wealth produced in the State

each year \$96,000,000. At present the home-grown timber is far short of the 200,000,000 feet of lumber required for the maintenance of the wood working factories. Small tracts of valuable hardwoods are still to be found in the western part of the State, but it will not be many years before these have been consumed.

Yellow poplar is used in larger quantities in the State of Ohio than any other variety of wood. The annual consumption amounts to nearly 140,000,000 feet, and the average cost is \$29.42. White pine comes second in the list with 120,000,000 feet at an average cost of \$29.68. Practically all of this is imported into the State of Ohio. A little over 100,000,000 feet of white oak is used, at an average cost of \$37.23 per thousand feet. Ohio produces about 46 per cent. of this total. Long leaf pine and short leaf pine are each used to the extent of a little over 70,000,000, the former at an average of \$26.26 and the latter at \$25.75 per thousand feet. All of this is imported.

Of the woods grown in Ohio, the greatest consumption record is that of white oak, the amount being over 46,000,000 feet. White oak grown out of Ohio is consumed to the extent of 54,500,000 feet.

Over \$124,000,000 is paid annually by the wood users of Ohio for their raw material. Over \$43,000,000 of this leaves the State annually

Editorial Short Lengths for Busy Readers

A recent ruling of the United States Treasury Department in regard to the duty upon flooring entering the United States will be rather an unpleasant surprise to some Canadian manufacturers who have been looking forward to extending their market in that country. A Canadian firm of flooring manufacturers shipped several car loads recently to the United States, expecting them to enter free of duty, under the new tariff. When the shipment came to the attention of the New York customs appraisers the matter of duty was referred to the Treasury Department at Washington, and a ruling was finally given to the effect that flooring, tongued and grooved, end matched, flat backed, and unbored for nails should be admitted free of duty, but that similar stock when hollow-backed and bored for nails should pay a duty of 15 per cent. ad valorem.

An interesting address was delivered recently by Col. H. Appleton before the Victoria Board of Trade's Committee on Trade and Commerce, at Victoria, B.C., upon the possibilities of promoting closer commercial relations between British Columbia and India. As a result of Col. Appleton's address, the Board of Trade's Committee has presented a report which, it is hoped, may lead to the development of an important trade in lumber between British Columbia and India. The committee in its report, say that they are impressed with the possibility of increasing this trade. The Douglas fir, cedar and spruce of British Columbia appear to be suitable for use in the tropics, the resins in the two former being obnoxious to white ants and the spruce being practically unaffected by climatic influences and therefore very useful for doors, windows, etc. The committee also report that, according to their information, these woods, in point of strength and durability compare favorably with the same class of lumber now in

use in India. The committee has brought these facts to the attention of the Hon. Wm. R. Ross, Minister of Lands for British Columbia and has suggested that specimens of British Columbia lumber and timber for test purposes be presented to the government of India. The committee also suggested that there should be offered to the Government of India, free of cost, a sufficient supply of British Columbia wood to be used in the interior decorations of chambers, offices, etc.

A series of regulations governing the floating of timber in Pacific coast waters in Canada is contained in an act recently introduced in Parliament. The proposed act prescribes that, whereas stray logs floating in the sea and tidal waters of British Columbia are a serious danger to navigation and it is desirable that action be taken to clear such waters from stray logs, therefore when any logs or timbers are found floating at large in such waters or abandoned, or cast up on the beach or shore, any person finding them and being authorised either by the British Columbia Government or the owner of the timber may take charge of the same and, if the owner can be located, notify him. The owner would be given forty-five days to claim the timber and pay salvage on it.

Another act that has also had first reading will affect sawmill and pulp mill owners who discharge effluent, sawdust, etc., into navigable waters. The proposed act forbids any person to deposit or allow to flow into any navigable water, or water that flows into navigable water—unless otherwise disposed of—any matter poisonous, noxious, decomposing, refuse or waste. Every private corporation convicted would be liable to a fine of not less than \$200 and every day during which the offense continues. Six months will be afforded corporations that now break the law to cease doing so.

B.C.'s New Timber Royalty Legislation

Outline of the Measure Presented by Minister of Lands in the Legislature—Royalty on a Sliding Scale to Grow with Lumber Prices

The new Timber Royalty Bill for the Province of British Columbia which was recently introduced in the Provincial Legislature was discussed on February 13th, by Hon. Wm. R. Ross, Minister of Lands, who spoke in part as follows:

A Bill has been introduced, and is now pending before the Legislature, which will settle the vexed question of royalty re-adjustment. This Royalty Re-adjustment Bill does these three things:

It gives a fair and just measure of certainty to timber license holders, and therefore stability to our lumber industry. It somewhat increases present returns to the government from timber royalty, and it provides for greater and greater increases in the future; by a profit-sharing principle—a recognition of the right of the people of British Columbia to share in the increasing value of their own timber property.

This bill is the product of several years of agitation and of more than a year of definite consideration of this whole royalty problem. This consideration has involved a thorough and practical investigation by the Forest Branch into the lumber values and costs, whose difference, less a margin of fair profit to the lumber operator, spells stumpage values.

Royalty Question

I have never looked upon this question of royalty increase as a mere question of money raising; I have looked upon it rather as a fundamental question in public forest policy. To me it has had three great purposes in view, not the object of taking from the industry the highest possible money revenue. These three great purposes are as follows:

First, so to settle this royalty question as to insure, to the highest practical degree, the welfare of all the people in British Columbia as far as the forests contribute to their welfare, and that is very far. Second, so to handle this question that the Government co-operates to the fullest legitimate extent in establishing and maintaining a permanent and profitable lumber industry in our province; and third, so to handle this matter, as to make forest conservation not a remote, but a nearer and more probable thing upon all timber limits.

For in the last analysis, the test of the success of the forest policy of this Government will lie, not merely in the present productiveness, but still more in the future productiveness of the forests themselves.

We have in our province vast areas of mountain forest land suited best to forest purposes. It is obviously the direct duty and responsibility of our Government to keep that forest land under productive growing forests; and that conclusion has been ever prominent in my mind in this whole royalty matter.

You will observe, therefore, that the increased revenue from the forests provided for by this bill has been treated as less important than other and more vital public considerations. That the bill will increase revenues is a happy result; but I would consider it an unhappy result were it accomplished by violation of any one of the three great principles I have just set forth; the welfare of the people, the welfare of the lumbermen, and the welfare of the forests.

This bill is not the result of the application to British Columbia wholesale of some plan worked out in some other country. I have taken into account the approach which all other countries have made upon this problem of disposing profitably of the public timber. From some I have gained help; from others I have gained nothing; but in the aggregate this bill typifies the independent, original consideration of our home problem. It is not a borrowed measure, taken from somewhere else with the hope that it may fit in with our local conditions. It is a bill drafted in British Columbia, based on a knowledge of British Columbia conditions, and my belief is that it will work to the satisfaction of British Columbians.

Forest Conservation

This is not merely a royalty measure. It is a forest conservation measure; the second great forest conservation measure which has been inaugurated by this Government in recent years. First came the inauguration of our Forest Branch which is already an alert, efficient instrument, directed by alert, efficient, zealous men, in the development, protection and wise use of forest resources.

Now comes, as I hope will come, the passage of this Royalty Bill, which settles, and settles definitely and settles fairly, the uncertainties which in recent years, both for operator and investor, have disturbed somewhat the stability of the finances of our lumber industry.

I hope that in the years to come, and not in the remote years either, we may take further great steps forward in our forest conservation policy. That policy, as I see it, has these great objects in view:

To protect our forests; to get them wisely and profitably used; and to keep them coming. The last calls for a fair and reasonable measure of practical forestry. I have some plans for that from which I think I will get, with profit to the lumbermen, the better assurance of a second crop upon the timber limits; and within a year I shall be ready to announce those plans. But before doing so I will discuss them, and modify them if necessary, and if I am convinced of the wisdom of the modifications, will work them out with the British Columbia lumbermen themselves.

I see no reason why British Columbia should not lead all other parts of North America, and even our progressive friends to the South of us, in practical forest conservation. I realize that we will have to move rapidly to accomplish that result. But I am entirely willing, in fact I am eager, to enter into such friendly rivalry with forest conservation as our goal.

The Royalty Bill comprises these four things: It fixes the royalty increase for 1915, and establishes a level of lumber prices on which future increases will be based. It provides seven five-year periods for royalty adjustment; and it provides that for each of these periods a given percentage of the price increment for lumber shall be added to the royalty. This percentage is twenty-five per cent. for the first five years, and rises gradually to forty per cent. for the last five-years period. The fourth of the accomplishments of the Royalty Bill is to re-adjust the rentals between the Coast and the interior, and fix them for the whole period of the Act. I will take up each of these four principles separately, and their application, and will attempt—so far as practicable—to forecast their results.

The Royalty Increase

First, the royalty increase for which the bill provides takes effect on January 1, 1915. The bill provides that these increases shall be, for Coast lumber, from the present royalty of fifty cents to seventy-five cents, an increase of fifty per cent. This increase, however, is not applied arbitrarily, but is the result of raising the royalty on different classes of logs in a proportion which puts the highest increase on the best logs, and no increase at all on logs of such low value that the increase would mean that they would be left lying in the woods. That plan is the particular application of the broad principle of forestry; to encourage the utilization of low grade material which otherwise might be wasted, and charge a fair rate of increase upon high grade material, which in any case would be utilized, because in utilizing it lies the chief margin of profit in logging.

The royalty increase in 1915 provides that in the interior, royalty shall be increased by the use of the B. C. scale instead of the Doyle. That means an increase of probably forty-five per cent. in royalty to the Government, and, as far as I and my advisors can figure it out, is an equitable adjustment of royalty between the Coast and the Interior. In the Central and Northern Interior, regions of great prospective timber development, the Government has imposed in the Royalty Bill a royalty charge of sixty-five cents per thousand board measure. This again, in my best judgment, fairly represents the relative conditions as to lumber values in that region, as compared with the interior and Coast.

The First Five Years

These three increases take place in 1915, and hold good for five years, or until 1920. Then comes the first re-adjustment based on increase on the actual lumber price of \$18 fixed by the bill. But before we take that up let me say a word about the general level of this royalty increase for the first five years.

Are they too high? The central facts of this adjustment must be kept well in mind. In my judgment they are not too high. They merely take up a certain amount of slack, and they impose upon the industry so small an increase for its raw product that they cannot fairly be claimed to disturb existing financial conditions. They pre-suppose—as any reasonable man must pre-suppose—that this period of depression through which we have recently passed, and from which we are already emerging, is a temporary thing. They pre-suppose that in British Columbia, as in the rest of the world, the price of lumber will not continue to fall spasmodically; and that the general tendency will be up and not down.

Are they too low? My belief is they are not too low. They might have been higher, for the Government had the whip hand, and they might have been two or three times as great, and still have been well within the limits of our power. But, as I have said before, this plan and policy of royalty re-adjustment is not merely a money raiser for the present, not a financial emergency measure to wring the utter-

most farthing out of the lumbermen. Moreover, the financial condition of our lumber industry at present is not a very rosy one. In the aggregate, some of our mills are making a little money, and some are losing a little money, but the general average is to break a little better than even. This is at the present moment. A little better than an even break; that is in general the lumberman's situation to-day. If that were made by an ill-considered royalty increase merely an even break, or a little below an even break, the result would be to deal a body blow to an industry not altogether upon its feet, although rapidly approaching that condition.

Progressive Increase

Now I will take up the progressive increase in royalty based on percentages of the price increment above the base level selling price of \$18. As you will observe, these increases are made, subject to the result of governmental investigations, and are applied at the end of each five years, to hold good for the next five years. Therein lies the great principle around which hangs this bill; the principle that the Government, the people, and the lumbermen are co-operators in an industrial enterprise; the principle that there should be frequent re-adjustment based on the actual facts, so that timber royalty may keep pace with the growth in lumber values. So far as I am aware no such principle has ever been enacted before on so broad a scale by any other nation.

The Government began by taking for the first five years twenty-five per cent. of the increment in the selling price of the lumber over \$18. This is true profit-sharing. The Government says to the lumbermen, in this bill: We will play fair with you; the more you get for product the more we will charge. But we will not take all of the add-

ed increment, we will take a fair part leaving to you good returns for your enterprise, your capital investment, and your risk. If the price of the product does not go up we will take no more than we are taking now. We will play fair.

The Rentals

Now take up the fourth provision of the bill, which adjusts and fixes the rentals of the whole period.

Why fix the rental? the open minded man might say. Why not leave that open? What is the use of tying it up for such a period? To such a man my answer is this: Every British Columbia lumberman is fairly entitled to have the rentals fixed during this period of the Royalty Re-adjustment Bill, and during the period that this profit is shared between the Government and him.

What will be the general effect upon revenue present, and future, of this bill? Coincident with its enactment this bill will increase our timber royalty by somewhere between \$50,000 and \$60,000. By 1924, if the annual lumber cut increases on an average at the conservative figure of five per cent. per annum, and lumber goes up moderately to \$21 per thousand feet, this bill will increase our royalty revenue to close on \$2,500,000 a year. After that it will go further, but that is far enough to estimate.

Hon. Mr. Ross concluded with an eloquent reference to the duty of the government as stewards of the natural resources of the province.

In explanation of Hon. Mr. Ross' reference to rentals it may be added that the new bill provides that the annual rental west of the Cascade mountains shall be \$140 per square mile, and the annual rental east of the Cascades, including the district of Atlin, \$100 per square mile.

Western Retailers' Annual Meeting

Association's Usefulness Strongly Illustrated During a Year of Trade Depression—
A. B. Estlin Elected President for 1914

The 23rd annual convention of the Western Retail Lumbermen's Association of Canada was held at Winnipeg on February 18th and 19th. A directors' meeting was held on February 17th to prepare for the general convention. On Wednesday morning the convention was opened by the reading of the minutes, after which the president, Mr. Joseph Mergens delivered his address, in which he noted that the Association had held its own in numbers during the year, although they had not made as much progress as they had hoped for in consideration of the number of new yards that had been opened. There was greater need to-day for Association work than ever before and he urged all members to do their utmost to stimulate its growth. New conditions were developing which made the value of the Association much greater. Competition was becoming more active and the efforts to do away with the middle man were becoming more vigorous. For his own part he did not expect that the move to obliterate the middlemen would be successful, as it would be detrimental to the interests of the consumer as much as to those of the retailer. He did not believe that a cash-on-delivery carload trade with the farmers could be carried on satisfactorily. A customer who dealt with a local yard saw what he bought before he paid for it and this was an advantage which would always work in favor of the retailer and against the carload trade. Nevertheless, there was great necessity for educating consumers in regard to this particular point. One of the chief matters to which they must also give their attention was the complete satisfying of their customers. A satisfied customer was a very valuable asset to a local yard.

President Mergens spoke also of the Saskatchewan lien act which had been in danger some time ago of being repealed. The value of the Association had been definitely demonstrated in this case because it had instituted a campaign which resulted in the lien law being upheld and amendments made to it which rendered it even more advantageous to the lumber merchants. This was a definite illustration of the value of the Association to its members. Many other advantages might be mentioned, among them the information available through the Association's credit system and the benefits secured from its mutual insurance company, and also from the information which it afforded in regard to the best methods of taking care of stock.

Association Holding its Own

Secretary Alan M. Stewart, in his report, said that the year's work had been carried on without drawing upon the Association's reserve fund. Forty-one new members had been added to the list which had balanced the number of members lost through suspensions and yards sold. The Association had made efforts to bring about the adoption of reciprocal demurrage. They had not been successful in this, but they believed that there were now indications that the Dominion

Board of Railway Commissioners were leaning towards the adoption of such a system.

The year 1913, Mr. Stewart, said, had been a hard one for the lumber trade, owing to the financial stringency prevailing throughout the west and the retrenchment in expenditures which resulted. The lumber trade, however, had come through fairly well and its members had learned a great deal, so that they were now in better shape than ever before. Mr. Stewart drew attention to the mistake, so often made, of over-crowding new territories with the retail yards and urged that the Association should give its attention to the working out of some remedy for this difficulty.

In the collection of claims from the railway companies the Association had had better success during 1913 than in previous years.

Mr. Stewart referred to the growth of the grain growers' organizations and to the fact that they had entered to some extent into the lumber business. This threatened a formidable kind of competition. Farmer's organizations were growing very strong and they were opposed to the middleman. This was a development which the members of the Association should watch carefully, with a view to meeting the situation promptly.

The special service department of the Association had been of much value to the members during the past year in looking after many of their individual complaints. Much had been done in the direction of preventing delays in deliveries on shipment and many other benefits had been secured which could not be had outside of the Association. Mr. Stewart also emphasized the advantages of the protection furnished by the Association's mutual fire insurance company.

Mr. J. E. McFee, assistant secretary, of Moose Jaw, made a brief report stating that the year's work in his district had brought fairly favorable results.

At the Wednesday afternoon session an interesting address was delivered by Mr. J. M. Brayley, organizer of the Saskatchewan branch of the Retail Merchants' Association of Canada, who explained in detail the objects of that Association. He asked particularly for the co-operation of the Western Retail Lumbermen's Association in keeping track of "dead beats." Considerable discussion followed Mr. Brayley's address and the members concluded that it would not be advisable at present to affiliate with the Retail Merchants' Association, although individual members might use their own judgment in regard to becoming members.

Retailers Need More Co-operation

Mr. Brayley also urged that a more friendly feeling among retail lumbermen in each town was of great importance. Customers often ran bills at one yard, when they were indebted to another in the same

town. Yard men were not on friendly enough terms with each other and would not advise each other of their customers' indebtedness.

In regard to this matter, one of the representatives present urged that their should be co-operation, not only among merchants, but between merchants and their customers, with a view to developing a better understanding. He did not believe that the time was ripe for the introduction of a cash business in Western Canada.

An interesting discussion then took place in regard to the competition of Coast mill men, some of whom were planning to send car lots of lumber to consumers at prairie points, where they could not sell through retailers who patronized other mills. A statement was made that two strong companies were now being organized at the Pacific Coast to handle this carlot business.

The rest of the session was devoted to a general discussion of methods for improving conditions in the lumber trade. One of the strong points brought out was the danger of inducing farmers to assume too heavy obligations in buying lumber and other materials, without sufficient regard to their ability to pay.

At the Thursday morning session the discussion upon "Means of

Bettering the Lumber Trade Conditions" was continued. The Manitoba lien act came in for criticism. As it now stands, this act makes it necessary to file a lien within thirty days, and for the merchants to sue within ninety days. It was decided that the government should be asked to extend the time for suing to twelve months.

Officers for the Current Year

The election of officers resulted as follows:—President, A. B. Estlin, Melita, Manitoba; vice-president, H. Meilicke, Saskatoon, Sask.; secretary-treasurer, Alan M. Stewart, Winnipeg; assistant secretary, J. E. McFee, Moose Jaw.

On Thursday afternoon, Prof. S. A. Bedford, Deputy Minister of Agriculture for Manitoba, delivered an interesting address on diversified farming and its effect upon retail trade.

An interesting address was delivered by John W. Barry, Cedar Rapids, Iowa, upon the "Economic Necessity of the Retailer." On Thursday a social evening was held at the Winnipeg Industrial Bureau and plans were arranged for the Hoo-Hoo Concatenation next September. This was followed by a smoking concert which brought the convention to an end.

Annual Report of B.C. Chief Forester

Revenue of Branch Greater Than Ever Before—Important Statistics of Production, Prices, Markets, Etc.—How U.S. Lumber Competed

The report of Mr. H. R. MacMillan, Chief Forester of the Department of Lands for the province of British Columbia, for the year ending December 31st, 1913, has just been issued, and is one of the most interesting reports of its kind that have appeared.

The public revenue of British Columbia, according to this report, is the largest of any province in Canada, being nearly \$27 per inhabitant, which is three times as great as that of the next largest province Manitoba, and over seven times that of Ontario. By far the most important item in this revenue is the portion derived from the provincial forests. In spite of financial stringency during the past year, the branch collected, during the twelve months ending December 1st, a revenue breaking all previous records and amounting to \$2,832,788 which is \$229,669 greater than the revenue for the twelve months ending December 1st, 1912. For the twelve months ending March 1st, 1914, the Chief Forester expects to show a total revenue not far short of \$3,000,000.

Diagrams which accompany the report show that the forest revenue of British Columbia amounts to \$6.63 per head whereas that of Ontario is only 79c per head, and Quebec 77c per head. Another diagram shows that royalties from timber cut in British Columbia during the twelve months amounted to \$489,377, whereas those of Ontario amounted to \$1,339,957, and those of Quebec to \$1,173,393.

Private timber lands, which are assessed for taxation at 2 per cent. on their valuation, showed a total acreage in 1913 of 922,948, being 48,233 acres greater than during 1912. The average value per acre was \$9.02 which is an advance of 42c per acre as compared with 1912.

The total forest revenue, including taxation on Crown granted timber lands for the twelve months ending December 1st was \$2,999,579. The estimated expenditure for the branch, for the fiscal year ending March, 1914, is \$245,754.

The forest protection fund to which the government and the timber owners contribute equal sums is estimated for the year ending March, 1914, at \$350,682.

Importance of the Lumbering Industry

Dealing with the lumbering industry and its importance to the province the report says:—

Even to-day, with the sea-going export trade in lumber still in its infancy and the available market for British Columbia timber practically confined to the Prairie Provinces of Canada, the lumbering industry constitutes the commercial backbone of our forest Province. The census returns shows that half our industrial capital is invested in the lumbering and wood-working business; that half the pay-roll of the province is derived from our forests; and that 37 per cent. of our annual production of wealth comes from that same source.

Important as is the part played by our lumbering industry to-day, it is obvious, in view of the immense timber resources of the province, that its development is still upon a comparatively small scale. Outside the Prairie Provinces it has practically no effective markets. Its cargo trade in 1912 was under 52,000,000 feet. The whole shipment to the east of Canada is confined to a few specialties, such as dimension timber and small quantities of high-grade material; and but a thin trickle of business in shingles and high grades has been possible with the United States. Chaotic overproduction has resulted from this shortage of markets, since the quality and quantity and

accessibility of our provincial forests have proved an overwhelming temptation to lumbermen to enlarge their mill capacity beyond current needs. Through a combination of circumstances even the near future may be expected to see a very great improvement in the conditions of the industry. Whatever differences of opinion there may be as to the exact commercial effects of the opening of the Panama Canal, it is beyond dispute that a general broadening of our markets for lumber will result. Sooner or later, moreover, the western freight-rates question must be decided in favour of the West. Panama in itself will attract shipping and make British Columbia more of a distributing centre for Western Canada, a position that will, of course, be immensely strengthened by any equalization of the rail-haul rates.

In the collection of forest revenue the returns of the Forest Branch show a cut of 1,457,000,000 feet, board measure, for the year 1913, an amount which is nearly equal to the combined output of the Provinces of Ontario and Quebec for the previous year. If the large amount of material used in railway construction during the year be included, British Columbia's total cut would approach 2,000,000,000 feet. The number of saw and shingle mills exceeds 425.

Logging Inspection

There were 794 logging operations in progress during 1913 on timber lands on which a royalty or tax had been reserved to the Crown. The product of these operations for the calendar year 1913 was, approximately, 1,348,000,000 feet of logs, 82,805 cords of shingle-bolts, 3,030,010 lineal feet of piling, 35,000 mining-props, 15,500 cedar posts, and 5,093,718 lineal feet of cedar poles. The loggers of British Columbia established a new record both for number of camps operated and quantity of timber produced.

Referring to the importance of efficient disposal of slash the report says:—

It is admitted that clean logging will depend upon the lumber market, for when there is no market for low-grade lumber the logger will feel disposed to leave low-grade logs in the woods. The general study which has been made up-to-date shows, however, that even under the market conditions which have governed during the past few years a great deal of material has been left to rot which could have been taken out profitably. The truth of this statement is borne out by the varying standards of different loggers. Some of the most successful in British Columbia have made a study of clean logging, and by cutting low stumps, exercising care in falling so as to reduce breakage, carrying log-lengths so as to take the full merchantable length of the tree, clean yarding, and using inferior logs for construction work and fuel have greatly increased the productivity and profits of their operations. On those operations where such business principles have not yet been adopted there is a tremendous waste of timber and consequent loss to the Government in royalty revenue. It is the aim of the Forest Branch to continue to work steadily towards a reduction of logging-waste by gradually bringing all operators up to the standard of utilization set by the most successful among them. This will become the most important feature of logging inspection.

During the year, fifty-nine timber sales, covering 22,775 acres (with a total estimated stand of 208,615,251 feet B.M.) were advertised at upset prices ranging from \$2 per thousand feet downwards, in addition to the usual royalties and renewals. The sales represent a total asset of \$238,476, with a further \$147,640 under advertisement.

Export of Forest Products

A lengthy section of the report deals with the export trade in forest products, regarding which it says in part:

The life of the timber industry of British Columbia depends upon the profitable export of forest products from the Province, for the local population uses less than one-fifth of the timber annually produced, and the other four-fifths must be exported. The situation has become more acute during the past year or two owing to the decrease of building operations in the larger towns and cities of the Province, and consequent falling off in the local demand for lumber.

During 1913, 120 permits to export logs were issued. The total quantity exported was 58,752,678 feet, which compares with previous years as follows:—

	Feet B.M.
1911	47,000,000
1912	53,280,375
1913	58,752,678

The quantity of each species exported from British Columbia during 1913 was:—

	Feet.
Cedar	22,678,030
Spruce	1,759,131
Fir	509,149
Pine	391,037
Hemlock	3,369

Total 25,340,716

Species unidentified, 33,411,962 feet (exported at 50 cents per thousand).

The quantity and proportion of each grade has been:—

	Quantity	Per Cent.
Grade No. 1	1,108,087	14
Grade No. 2	2,759,693	36
Grade No. 3	3,829,238	50

The export of smaller unmanufactured products is growing. For instance, there is keen market in the United States, on the Prairie, and in Eastern Canada for cedar poles, and the export of cedar poles for the year amounted to 2,562,942 feet. About 2,000,000 lineal feet were shipped from the Cranbrook and Nelson Forest Districts to the Prairie, the Central States, and Ontario; 500,000 lineal feet were shipped by boat from the tide-water camps to Central and Southern California. The total value of pole shipments was \$179,406. Again, the Cranbrook and Nelson Forest Districts constitute the chief source of fence-posts for the Prairie, and furnish a large proportion of the railway ties and mining props used annually in Alberta and Saskatchewan. The production of these timbers has become an important adjunct to the lumber business in these districts and makes possible the complete utilization of all material. The exports of these products from these districts for the year were:—

	Quantity	Value.
Fence posts	11,190 pieces	\$ 57,400
Railway ties	1,128,270 "	451,308
Mine props	6,000 cords	36,000

The total value of the logs, poles, piles, posts, ties, and props exported from British Columbia in 1913 was \$1,321,640.78.

The Export Markets of British Columbia

The most important item in British Columbia's trade is the export of manufactured timber. The Province has been so favourably situated for this trade that it has grown up without any form of Government or public assistance or encouragement. The three chief natural markets are the Canadian Prairie, the United States, and Eastern Canada, and the sea-borne cargo trade.

Up to the present the Canadian Prairie has been the most important market, for it has taken three-fifths of the timber-production of British Columbia, and the majority of the sawmills in British Columbia have been built for this trade. An important feature of this market has been that, whereas the other export markets open to British Columbia mills will take only the highest grades, all grades may be shipped to the Prairie. During the past five years there has been keen competition in this direction. The lumber manufacturers of Western Ontario ship 50,000,000 feet per year into Winnipeg; the spruce manufacturers of the North (favoured greatly by freight rates) distribute about 225,000,000 feet annually; and the manufacturers of the Western States (whenever conditions are bad on the home market) unload 140,000,000 to 270,-

000,000 annually in the Canadian Prairies. The shipments of timber into the Western Provinces from the United States during the first eleven months of 1913 were about 50 per cent. less than during the same period in 1912 (which was the record year), and were not so great as during the same period in 1911. The exact shipments in comparison with 1912 and 1911 are shown in the accompanying table.

Eastern Canada Markets

Many British Columbia lumber manufacturers believe that the time has come to develop the markets of Eastern Canada and the United States to a greater extent. The great lumber-consuming districts of this continent lie around the Great Lakes and along the Atlantic Coast, and the recent removal of the United States tariff on all lumber, places British Columbia manufacturers in a position to compete on free terms with that great market of nearly 100,000,000 people. Up to the present, shipments to Eastern Canada have consisted of a few million feet of Douglas fir annually, for large construction timber, railway-car building, public works, boats and scows; together with cedar shingles and cedar finish. Similarly, shipments to the United States have consisted of shingles for the middle west and cedar finish for the New England States. Both in Canada and the United States there are many markets which can, and sooner or later will, be supplied from the United States. Douglas fir dimension timber in large sizes for big construction will find sale in competition with southern pine. Our shingles, moreover, can compete everywhere, while Douglas fir flooring and inside finish, cedar siding and clapboards are on an equality with the best products of the east. The fight for larger markets will be greatly helped if favourable rates are secured through the Panama Canal. It cannot, however, be successful until the products which British Columbia lumbermen are ready to sell are made known in the buying centres of the east. Eastern people are surprised when they visit the Coast and see the beautiful effects produced in house interiors with British Columbia woods. They will buy this timber if it is put before them in the east.

The cargo trade of British Columbia has shown sign of growth during recent years. It constitutes on the average less than 5 per cent. of the lumber trade of the province, and only three or four mills are engaged in it.

The following table shows the comparison between British Columbia and the Western States:—

	From Wash., Ore., Columbia River and South	From British Columbia
Australia	177,556,404	25,788,248
West Coast of South America ...	103,813,354	6,683,752
China and Japan	67,174,100	2,710,683
Mexico and Central America ...	32,118,885	552,492
United Kingdom and Continent ..	16,555,058	12,019,659
Africa	8,622,430	2,158,700
Other foreign ports	47,564,301	1,598,522
Philippines	16,564,301	.....
Hawaii	62,408,942	.....
East Coast of U. S. A.	4,699,000	.....
	537,074,775	51,512,056

In addition to these cargo shipments, British Columbia exported 53,000,000 logs to the State of Washington.

The total timber imports of the principal countries of the world

IMPORTATIONS FROM U.S.A. TO MANITOBA, SASKATCHEWAN, ALBERTA, AND BRITISH COLUMBIA.

Lumber, Laths, and Shingles from January 1st to November 1st, 1911; January 1st to November 1st, 1912; and January 1st to November 1st, 1913.

	1911.			1912.			% Increase 1912 over 1911.	1913.			% Decrease 1913 over 1912.
	Feet B.M.	Value.	Aver. per M.	Feet B.M.	Value.	Aver. per M.		Feet B.M.	Value.	Aver. per M.	
Planks, boards, etc., dressed one side not dutiable	190,768,000	\$ 2,324,994	\$12.13	207,762,000	\$ 2,377,262	\$11.44	9	106,299,000	\$ 1,552,760	\$14.61	49
Sawn boards, etc., dutiable	31,348,000	390,866	12.11	49,291,000	645,670	13.09	53	17,843,000	303,971	17.04	64
	222,116,000	\$ 2,715,860		257,053,000	\$ 3,022,932			124,142,000	\$ 1,856,731		
Laths	58,220,000	\$ 134,795	2.31	63,720,000	\$ 134,624	2.11	9	32,996,000	\$ 78,361	2.37	48
Shingles	17,206,000	32,781	1.90	82,887,000	152,402	1.84	381	3,400,300	65,153	1.92	59
		\$ 2,883,436			\$ 3,309,958				\$ 2,000,245		39

are annually about 7,507,360,000 feet B.M. British Columbia supplies but 1 1-3 per cent. of this total, though no country is better equipped to be an important factor in the world's timber trade, the annual growth of merchantable material in the province being several times the annual cut, and large quantities of it being accessible and cheap to log. Though at present the sawmill capacity of the province could supply double the present trade, this unfavourable condition cannot be expected to continue when the Panama Canal is open and the new transcontinental lines have trebled our facilities for eastern shipment. There are many timber holders prepared to invest more money in logging and timber manufacturing enterprises as soon as the market for their product develops.

Finding a market for more timber either in Eastern Canada, the United States, or the overseas countries is a long, slow process. Nevertheless, the increase of the industry and settlement of the province depends largely upon it, as does any increase in the Government revenue from royalty. Finding a market involves making the commercial timbers of British Columbia known to the purchasers of the world, a matter that is (after fire-protection) the most important work of the Forest Branch, which would naturally work out in conjunction

with the lumber manufacturers of the province the details of a campaign of trade extension such as is necessary. Representations have already been received from lumber manufacturers pointing out that their efforts to establish a trade with Eastern Canada would be greatly assisted if an exhibit of fully manufactured and finished British Columbia timber were established by the Government at some central point. I heartily concur with such a suggestion. No opportunity should be lost for placing exhibits of manufactured British Columbia timber in the lumber-buying centres of the world.

The total damage caused by forest fire during the year was only \$18,354, as against \$313,273 in 1912. The damage to standing forest was only \$4,387, as against \$200,000 last year. Fires covered and damaged to a greater or less extent less than 6,000 acres of merchantable timber and 2,000 acres of valuable second growth; 2,535 acres of slash was also burned, making a total of 10,270 acres, as against over 150,000 last year. The damage to other forms of property totalled only \$13,967.25, as against \$113,273 last year. Over 60 per cent. of this was due to a single fire in Cranbrook District which destroyed a large quantity of saw-logs on skidways.

Talks With the Lumbermen of British Columbia

No. 6—By Douglas Fir

One Hundred "Don'ts" for Incorporators and Others

Don't "float" your stock, just subscribe and pay in sufficient of real money for the undertaking. Webster passes upon the word "float" as applied to stock, as correct. Personally, I think it too suggestive.

Don't expect dividends, nor feel disappointed if you do not receive them on capital that has never been invested.

Don't expect, when working on borrowed capital to pay a high rate of interest on same, and a large dividend too. That would be equivalent to double dividends.

Don't incorporate as a lumbering concern until you have first acquired some knowledge of the undertaking.

Don't, after you have incorporated, appoint a directorate having less familiarity with the undertaking than a politician has with the pulpit.

Don't launch the undertaking with an unqualified man in charge. For though he may have many capabilities, yet if he is not a lumberman he is not qualified for this one. You would not appoint a Master of Languages to teach Arts and Science. Nor yet a Greek Professor to teach the Modern Languages.

Don't ask the man upon whom you have conferred the honor of piloting your undertaking through the uncertain channels of irregular competition, to carry so much canvas that when his ship approaches the dangerous places along the way it will become unmanageable.

Don't over-capitalize your undertaking; neither is it wise to provide too much real money within easy reach of such undertaking. Start it right, and then let it be self-supporting. It takes money to operate a lumber business, but sometimes too much is as bad as too little, if you are looking for profits.

Don't be deceived. The lumber business is not a get-rich-quick scheme. It is a legitimate undertaking, and should be entered into as such, treated all the way through as such, and conducted as such. If you want to get rich quick, and only want to use the lumber business as a stepping stone, we, who have legal claims upon the industry, would respectfully invite you to step on something else, as craftiness of that kind brings reproach upon the business, and everybody concerned therein.

Don'ts For Managers

Don't undertake the management of a lumber business with no better qualifications for the position than having been successful in something else of an altogether different nature, or knowing some of the incorporators. There are things which have to be learned in the lumber business, that have never been written in books, and cannot be learned in a day, nor yet in a lifetime in association rooms.

Don't force your ideas, gathered at association rooms upon your heads of departments without first consulting them and getting their views. They might show you that your views would not suit your case at all, and that it may have been a Mutt and Jeff joke with your associates.

Don't ignore those who have to bow in submission to your will. It may be that they know more about the business than you do, or perhaps more than you will ever know. Get next them, and learn of them, if you can.

Don't question the head of a department on any part of the work

in a way that would indicate that you were testing his knowledge, when all the time you are only trying to steal information from him for your own notebook. He likely suspects your motive.

Don't, when the head of a department offers a suggestion in a right spirit, cut him short by telling him that your mind is already made up. It is a silly judge who will attempt to render his decision before the evidence has been presented.

Don't be averse to learning from a subordinate. His garments may be dusty, but he may own a store of diamonds in the shape of knowledge, which you will never be able to possess.

Don't let a man go out from your employ under a charge of incompetence or any such unsavory distinction, and then later take him back at more money, or under improved conditions on your part. It shows weakness and incompetence, but not where first alleged.

Don't forget that the time to insert the bond of good-fellowship and loyalty between yourself, your company, and your men is when their condition of subserviency has made their conception penetrable. You will find such bond the most enduring, notwithstanding adverse vicifications.

Don't try to squeeze the men when work is scarce. Their day will come again, and they do not easily forget.

Don't allow your office to be closed at 5 o'clock when your neighbor keeps his open until 6. If you do, you must not feel disappointed, nor accuse him of wrong doing if he bags more game than you do.

Don't forget when you are planning your holiday, or your trip to Europe with full pay and expenses, that the man upon whom you have condescended to confer the honor of carrying your load and his own too, though he may courteously accept the situation as inevitable, yet feels the injustice of your generosity concerning him.

Don't place in the hands of an incompetent, or one addicted to the habit of "butting in," any commission of authority. There are enough good and competent men to fill such places. If you do not secure them it is your loss, and your competitors gain. Such "butter in" can do more to disrupt an otherwise good organization than they can ever undo.

Don't bother about saying your prayers, if you have been voted an increase in salary by your directors, and then in turn you have reduced the wages of your men to save the amount back for your company. The Lord will not waste time listening to such prayers.

Don't waste time in trying to harmonize the causes which enable you to begin work at 10 a.m. and then forget to go back after-noon; with those that compel your workmen to begin at 7 o'clock, and work until 6. There is no harmony or justification in this.

Don't go away to see the ball game, or the lacrosse match under full pay, and leave your superintendent to explain to your men why it is impossible to allow them to go when they do not expect pay for it. He hates to do this, and besides it makes him feel silly.

Don't, when you have made it a common practice to cease work at noon on Saturday, but collect full pay, refuse the men working for you an occasional Saturday afternoon off when they are willing to lose their time.

Don't, when you discount all your papers, or pay interest on all

bills payable, allow accounts owing to your company to run without interest.

Don't let people "use" you, or your company, just for the sake of being known as a good fellow. It does not pay.

Don't advertise in your Trade Journal. If you do, the customer might find a more direct means of reaching you than through the medium of two or three middle men. But if you do advertise,

Don't take the trouble to tell the public what you can do in the way of serving its demands in your line. Just get your name in, and tell who the officers of your company are. That will do, unless you want results from the advertising.

Don't think about your balance sheet until the end of the year, because it cannot be taken out until then anyway, but when it is finally out,

Don't fail to raise a furore because it is not up to your expectations.

Don't, whatever else you do, take any of the blame upon yourself when you are called upon to explain. Just blame it upon the general incompetence of your subordinates, and

Don't fail to make use of this opportunity to show how, when you have been thinking and worrying about the business day and night, their thoughts have been centred upon ball games and such like.

Don't try to inaugurate any system that would enable you to tell what the costs of your different products are as time goes on, unless you are anxious to know before the end of the year whether you are selling at a profit or a loss. For you know you can find this all out by the balance sheet at the end of the year, and thus save lots of trouble.

Don't mind if you are using a better class of logs than is necessary for the kind of business you have in hand. If you decide that they are the right logs to use then it must be so, even though your neighbor is filling the same class of orders from cheaper logs. Your sales are made with less effort, but what of your profits?

Don't jump. Anyone who has had any experience on the rivers and streams in the eastern provinces has seen or heard of the "Jumping Frenchman." If a companion, riding down the stream on a log with him would say "jump" he immediately jumped, with as little hesitation as a dog jumping in the water after a chip. It matters not where he is, if someone says jump he jumps. Now I have often thought that while it looks ridiculous in the extreme for a man to jump in that way, without being able to think what he is doing, yet we sometimes view it in a different light when it is brought home. To illustrate: A certain number of men can load a certain number of cars in a week, which number fully takes care of your output. Telegrams come from irate customers, to whom false promises have probably been made, asking for car numbers for several orders. Unintentionally perhaps a word is dropped which brings the matter to your attention. You investigate. The stock is in the yard, but the sales manager forgot to give these orders to the shipper in their proper successive order. You "storm" about, and order the shipper to get on extra men quick and get those cars out. He says he does not know where to get men, and you tell him to go to Helen Hunt for them, and when he gets them keep enough to keep his work up. The shipper gets "wise," doubles up his crews and gets the cars out in three days, and then keeps his men in hiding, or doing unnecessary work for the balance of the week for appearance sake. You jumped, didn't you? Doubled your costs right there without thinking. Made a nice hole in your balance sheet. What I say, I say unto all; don't jump, but think.

Don'ts For Superintendents

Don't accept the responsibility of such position unless competent. Much importance attaches to this position, and if you have not the qualifications, you are standing in the way of a good man.

Don't forget that you are the medium between the office and the men, and that you must be absolutely fair to both.

Don't take sides with any faction, or element, until you are sure of the merits of the case, then exercise the authority vested in you on the side of right, and without fear, or hope of favor.

Don't talk to one man about another, neither ridicule your employer to the men, nor the men to your employer, nor tolerate gossip in any form.

Don't be above considering suggestions from your men if they are offered in a right spirit, and

Don't fail to acknowledge such offerings with thanks.

Don't think that if a man offers you a suggestion he is after your job. He probably never thought of such a thing, and if you are filling your position properly you need not worry.

Don't allow any friction, or squabbling amongst the heads of departments, nor amongst the men. Unless harmony exists, and all understand that they are working in one common cause, best results can't be attained.

Don't assume that you are the brains of the whole works, but use what brains you have unsparingly for the good of the whole works.

Don't shift your disagreeable duties on to the shoulders of a fore-

man. You know how you view this when the manager loads his upon you.

Don't let the office "run" you. Your duties are plainly known to you, and you, and you only are responsible.

Don't blame the foreman if you see a piece of timber worth a dollar or two cut off the end of a stick and sent to the refuse burner. Find out first the reason. You will probably trace it to the "rush" order man.

Don't insist upon keeping more facts and figures (except for your own information) than the manager wants. It may be that a friend of his preceded you, and too many figures might be objectionable.

Don't let your nerves be troubled if the manager goes after you about troubles incidental to your position. Just remember that it is your duty to listen to all the troubles of whatever nature they may be in or about the works, and to find a solution of all the problems, and if the manager chooses to come along and pour on some more why should you worry?

Don't worry the manager with your troubles, but remember that he has problems of his own. Help him if you can, but don't bore him.

Don't show undue familiarity with your men. Be courteous, and fair with them in all things, but show an unmistakable firmness as well, and be just as ready to acknowledge good in them as to reprimand them for evil.

Don't minimize the importance of your position. If you are the right man for the place you are not likely to have much trouble, or make much noise in the performance of your duties; but nevertheless, they are arduous and technical, and many of the things which you have to contend with are known to but few. The man with the big noise may seem to the uninitiated to be doing more than you, but noise is not a necessary element of success. You must weigh carefully the things you do, and never "jump" at anything.

Don'ts for Sales Managers and Salesmen

Don't accept this position with the feeling that it was offered to you because you were the only man big enough for it. It may be that the manager was mistaken in you, or perhaps he took pity on you, or was interviewed by some friend in your behalf, or again he may have removed you from some other position to this one, and had not the courage to fire you.

Don't, now that you are in a position where you meet the public, assume an unnatural air.

Don't try to appear to be something that you are not. By doing so you only make yourself appear ridiculous.

Don't, for the sake of being a good fellow, or for any other cause, let it be real or imaginary, allow a customer to flim flam you into doing that which you know is wrong, or not in the best interests of your employer.

Don't jump and grab the "rush" order bait, not unless you are a sucker, and are easily caught.

Don't forget that good fishermen are sometimes the most wily individuals, notwithstanding that they may appear to be sleeping on the job. In no place perhaps, was there better "fishing" than in the lumber business during the past year and many "suckers" have been bagged by the astute buyer.

Don't consider it a humiliating thing to consult the superintendent, or the foreman of the department interested, if it is possible to do so, before making rash promises concerning special, or large undertakings. Their position enables them to give you valuable advice as to what promises to make.

Don't forget that you are only a salesman, and cannot be expected to know the position at the mill at all times by intuition. Consult the mill as often as possible, if you would like to stay out of trouble.

Don't guess. Usually the man who is ready and willing to guess is not a good guesser. The fact that he would do so in business shows that his judgment is not good.

Don't introduce any cheap slang, or smart phrases into your repertoire when greeting a customer; it is often obnoxious. Undue familiarity too, has turned down more good prospects than the one responsible will ever know.

Don't countenance anything that bears the earmarks of what is commonly known as graft, or double-dealing. Show your customer that you resent even the suggestion, if made, and yet do it in such a way that if he has any manly principle he will respect you for your resentment.

Don't be contented with selling just what the customer asks for, but try to interest him in something that has accumulated that you would like to move. You cannot always accomplish this, but sometimes you can, and it helps to keep down undesirable accumulations. An ordinary clerk could sell a man what he wants, but a salesman, or sales manager should use strategy in showing his customer what he has in stock for quick shipment, and which he might be able to use as a substitute for some part of his order, and thus not only get better delivery, but also save some money on the purchase. Try this.

Don't feel peevish with the mill if you have foolishly promised a

customer something bordering on impossible, and then find that the mill cannot get you out of it in the stated time. The mill is not to blame. You ought not to have guessed.

Don't tell your customer that the mill is at fault for his order not having been shipped on time. Tell him frankly that in the largeness of your desires to please him you had not mingled judgment.

Don't allow the idea to grow upon you that the only way in which to secure business is by offering the customer inducements by way of lower prices, or by juggling with the grades. Nothing shows your weakness more clearly than this. Use your personality, if you have any, and show your customer that you are in a position to give him prompt and superior service, if you are, and mention the good points of the goods you are handling, if they have any.

Don't lie to him, nor try to pump him up with hot air. Be careful about your promises, and then when you have carefully weighed them and then made them, be just as careful to see that they are not broken.

Don't expect to keep your promises when you are dependent upon others for their fulfillment, unless you have first consulted with those others and ascertained what position they are in for performing their part.

Don't accept an order unless it has come through a sufficient number of middle-men. Let your competitor take them at first hand if he wishes, but you remember that the middle-men have to live, and you stick to your principle of doing all the good you can, to as many people as you can, in all the ways you can, and as often as you can. Never mind the profit.

Don't use up all the company's profits in telegrams in wiring car numbers forward before the car is loaded, to satisfy irate customers to whom you have made unwise promises. Such business methods bespeak frenzy.

Don't "fall" for the man who offers you flattery, but look out for him with a double watch. He may have a card up his sleeve, or fishing tackle in his pocket.

Don't be given overmuch to using the pronoun "I" when discussing the filling of an order with your customer, but rather say "we" instead. It not only sounds better, but the customer will then understand that you are not the whole organization, and as one can naturally expect more from joint effort, he will be more likely to place the order with you.

Don't overlook the fact that though you may interpret some of this as ironical criticism, yet, of a truth, yours is a very important position, and one which none other than a good man can fill. Others can occupy the position for a while, but perhaps they do not fill it. A sad commentary might be made upon the filling of this position at more than one mill in British Columbia, but has enough not been said already in these talks to show that right here, as much as, if not more than, anywhere else, is the spot where the iniquity of the fathers is visited upon the children even unto the third and fourth generation. The fathers are those higher up, and who made the blunder. The children are the men that are affected when a business is stranded.

Don'ts For Buyers

Don't place your order with the mill that stands ready to make you the best promises, just for the sake of a slight undercut in price. They will probably get it out of you in some other way.

Don't specify special lengths when you can use random lengths just as well, for the random lengths can not only be bought cheaper, but you may also get your order filled more promptly by using them.

Don't order 16-foot lengths just to help the mill out, thinking that this is the easiest length to get, for nothing was ever further from the fact, as there is always a "run" on 16-foot lengths. If you want 16-ft. stuff order so, but if you are going to cut it into other lengths, you will confer a favor and advantage upon the mill if you will give this information. The same thing applies to any other special lengths.

Don't be afraid of giving the mill too much information as to the uses to which the lumber is to be put. Such information not only gives a double assurance against mistakes, but it sometimes saves the expense of costly telegrams, and makes it possible to fill your order more promptly.

Don't mediate for weeks upon the placing of an order, hoping thereby to save some paltry sum, and then finally wire the order in, and the next day begin wiring for the car number. Orders are always better understood when written out carefully and as far as possible, in detail.

Don't be afraid to ask the mill for advice concerning anything about which you may be in doubt. It may prove to your advantage, as well as to the advantage of the mill if you will do this.

Don't place too much confidence in the mill that is willing to make you unusual promises. Promises are not always kept by some people.

Don't read the Canada Lumberman, unless you are looking for knowledge, and want to be posted along the lines of interest to lumbermen.

Don't forget the mill that has been good enough to carry you over a period of hard sledding, and then when business improves go

to the mill that offers questionable inducements. If you do you may live to regret it.

Don't depend entirely upon wiring your orders in. That is not economy. Letter postage is much cheaper when time will admit of it.

Don't be a bear and sleep all winter, and then want everything at once in the spring. Get a few cars on the road now.

Don't run away from a man if he offers to give you a carload of lumber. Keep at a safe distance though, and watch him closely while someone notifies the police. There have been some dangerous lunatics travelling the country during the past year or more.

Don'ts For The Logger

Don't open up a logging camp unless you know something about the business, and are fond of hardships and disappointments.

Don't let your men run your operations to suit themselves, unless they know more about the business than you do.

Don't let them cut the logs into promiscuous lengths without method, but see that they are measured correctly, and the proper allowance and no more is made for trimming in the mill.

Don't let them cut a log 40 feet long if 30 feet of it is clear, but see that they measure up as far as the tree is clear, and cut it there, let it be one log or two, and then do likewise in that part of the tree which properly grades as No. 2, having due regard for crooks, and so on in the top of the tree, or that part that would grade as No. 3.

Don't pay any attention to these remarks about grading the logs in the cutting, unless you want to make money, for there is money in it.

Don't say that you cannot get your men to do it. Try it, and then keep on trying, and you will find that it can be done.

Don't allow your men to measure past defects and cut the log so as to leave both ends sound, and the middle defective. That is not honest, and you will lose more than you will gain by it.

Don't allow the man who booms up your logs to put them into the boom just as they come, without regard to size, but rather see that the larger logs are placed around the outside next the boomsticks. This makes the towing proposition a safer one, and the scaler will bless you for your thoughtfulness.

Don'ts For The Architect

Don't read the Canada Lumberman. It still insists that there are some uses to which lumber should be put in preference to other materials.

Don't when working out a plan or specification, use too many of the standard sizes. It simplifies the work at the mill, reduces the waste, and enables the purchaser to save some money on his purchase, and also get his order filled more promptly.

Don't trouble yourself about the waste or inconvenience in getting out special sizes or lengths at the mill. It may be that you intend to cut them into other lengths on the job, but what is that to the mill.

Don't give out any more information for the use of the mill than you can help. The mill is filling such orders as yours all the time, and what you do not make plain to them they can guess at.

Don't forget that lumber, even at the present day is used for more different purposes than any other material known (when I speak of lumber I include all the products of the forest) and it is worthy of a great deal more attention than is being given to it. There may be a day if the world stands long enough, when lumber will be a thing of the past, but it will not be in your day, nor in mine, and this being so, there is nothing better for us to do than to study to make the best use of it possible, because, as long as there is lumber to use, it will be used. Let us hope to conserve it as much as possible, and make the supply last as long as we can, but we never can rule it out of use. Time and evolution alone can do this, and the bud has not yet begun to open which is to reveal to us, or to those who are to follow us, the real substance of the material which is intended to take the place of lumber in the plan of the Great Originator and Creator of the Universe.

The Smart-Turner Machine Company, Hamilton, Ont., have issued an attractive catalogue (No. 9) describing their power and steam pumps. The catalogue is attractively printed and contains a large number of excellent illustrations.

The New Ontario Colonization Company, Limited, whose mills are at Jacksonboro, Ont., and sales office at Buffalo, N.Y., in the New York Telephone Building have favored their business friends with a very attractive calendar decorated with a fine colored picture entitled "Where Great Pines Grow." The calendar is a very useful one, showing the quarters of the moon and giving the number of each day in relation to the other days of the year.

Any man who has worked teak on a planer will not envy those Chinese their job of working teak into furniture and mill work, because it is a wood with a native grit that dulls tools rapidly.

In Charge of Ontario Timber Lands

Chief of Great Revenue Producing Department, Responsible for Provincial Forests—Hon. W. H. Hearst

The Hon. Wm. Howard Hearst, Minister of Lands, Forests and Mines, for the province of Ontario, is in charge of one of the most important departments under any provincial government in Canada. Indeed, in point of magnitude of its responsibilities and duties, it is the equal of many of the Departments of the Government of Canada. The Department has control and direction of the exploration survey and disposition of the lands, forests and minerals in an area of 343,275 square miles, which is equal to several European kingdoms. It is not only a revenue-producing Department, but a spending Department as well, and has a staff, inside and out, actually engaged in its management, of over 200 officers, besides nearly 1,000 fire rangers and other officials on duty in the summer period when there is danger of fire. The Department is divided into two sections, Lands and Forests, and Mining, each with its deputy, and again sub-divided into branches with a chief clerk presiding over each. The sections are again sub-divided into various branches, for the effective carrying out of the vast quantity of detail work involved in such a Department.



Hon. Wm. Howard Hearst

The Lands and Forest Section

The Lands and Forests section of the Department is divided into seven branches, of which one is called the Woods and Forests branch, under the management of which comes much of the detail connected with the lumbering industry of the province of Ontario. The Woods and Forests branch is the chief revenue-producing branch of the Department. Its staff includes a chief clerk and thirteen clerks under his control. Its work includes the management of all timber sales, the issue of timber licenses, the measurement and return of timber cut on licensed and other lands, the collection of ground rent and timber dues, the settlement of disputed accounts, refunds to settlers, the checking of timber returns, the instructing and directing of forest rangers and cullers, and the direction and control of the fire-ranging staff. All accounts for timber dues are prepared in this branch, and various other matters pertaining to the management of the forest lands of the province are dealt with. The area under timber license last year was 18,410¾ square miles, and there were 643 licenses issued. The accounts open upon the books of this branch numbered 483 and the revenue collected was \$1,985,662.78. The foregoing facts are mentioned by way of preface, so as to give a fair idea of the magnitude and importance of the work carried on by the Department of which the Hon. Wm. Howard Hearst is Cabinet Minister.

The Hon. Mr. Hearst is a man of pioneer stock who was brought up on a farm in the county of Bruce and who has inherited an appreciation of the difficulties of pioneer life which has developed in him a lively sympathy for those who are compelled to wring their livelihood from the soil. His sympathies are especially active in favor of those who are engaged in clearing up a bush farm.

The Hon. W. H. Hearst was born in the township of Arran, Bruce County, on February 15th, 1864, and was educated at the Collegiate Institute, Collingwood and the University of Toronto. He is also an honor graduate in law of Osgoode Hall. He was admitted to the Bar in 1888 and is now the senior of the law firm of Hearst, Rowland and Brown. He has practiced his profession successfully at Sault Ste. Marie, Ont., for twenty-five years. Upon the formation of the Whitney Government, Mr. Hearst's ability was recognized by his appointment as government agent in connection with the guarantee loan to the Lake Superior Corporation.

Some of the Minister's Difficult Duties

In the course of his duties as a Cabinet Minister, Hon. Mr. Hearst has frequently to sit in judgment upon disputes, and although he cannot satisfy all parties in every case, those who have appeared before him realize that he is thorough in his investigations and prompt in announcing his decisions. Being a lawyer, and having had the advantage of a large practice in a lumbering and mining constituency, he is

equipped with an intimate knowledge of the affairs upon which he is so frequently called to adjudicate.

One of the most important matters coming under the Hon. Mr. Hearst's attention is the protection of the forests from fire. In this direction he has achieved practical results by increasing the number of fire rangers. Matters of conservation and reforestation have also occupied his attention, and so much impressed has he been with their importance that, at his suggestion, an expert forester has been employed to study these questions with a view to protecting and prolonging the life of the forest wealth of Ontario.

A delicate duty falls upon the Hon. Mr. Hearst in holding the balance between the interests of settlers and lumbermen. There are many occasions when these interests are found to clash and it is the duty of the Minister to harmonize them as much as possible. Hon. Mr. Hearst has improved the position of the settler in respect of his rights to timber and minerals on his land. Under his inspiration the legislation affecting mines and timber has been made more favorable to the settler than it was before he entered office.

Developing the North Country

Securing industries for the north country, so as to provide employment and a market for whatever the settler could raise, as well as the timber he has to sell, has been one of the Hon. Mr. Hearst's important duties. Lumbermen have been much interested in an effort made along these lines, which is resulting in an important development under the management of the firm of Jackson and Tindle, near Cochrane. Another development of great importance to the north country, which has been worked out under the Hon. Mr. Hearst's direction is that which involves the erection of large pulp mills at Abitibi. These two undertakings will furnish important markets, both for the settlers' products and for their labor.

The Hon. Mr. Hearst is in the prime of life, being under fifty years of age, and is able to devote to the management of his Department all the enthusiasm and vigor of a young man with his heart in his work.

An important announcement in connection with the government's forest protection policy, was recently made by Hon. Mr. Hearst at the banquet held by the Canadian Lumbermen's Association at Ottawa. In an excellent speech upon the forest resources of the province, Mr. Hearst spoke of the great importance of a first-class fire ranging service. He also stated that during recent years much had been done to improve the fire protection service of the province by the construction in some of the reserves of telephone lines and lookout towers, and by providing gasoline boats, speeders, etc., where these could be used to advantage, and in other ways; and that it was the intention of the Department to continue to improve the service by extending these and other improvements to all the reserves where it was practicable and advantageous so to do, and generally by perfecting the service as much as possible so far as the money available for this purpose would permit.

Robert McNair Co. Erecting Shingle Mill at Port Moody

A start has been made on the erection of the shingle mill at Port Moody, B.C., which is to be established by the Robert McNair Shingle Company, near the head of Burrard Inlet. The plant will be considerably larger than the one operated by the same concern in Hastings. Twelve machines, capable of turning out 350,000 shingles a day, will form the equipment at the new mill. The company will use the railroad built by the B. C. Electric Railway to the Coquitlam Lake dam in connection with its power development scheme, having leased the line for a period of 25 years. The timber berths owned by the McNair interests are five miles from the site of the new plant near the head of the Inlet. Logging will be started as soon as the weather conditions become favorable. Between 60 and 100 men will be employed at the camp and about 45 at the mill. Mr. J. R. Crockett, who was for many years in charge of logging operations for a large California concern, has been appointed superintendent, and is making arrangements for getting out a large supply of cedar bolts. Sawing is expected to be commenced in the latter part of May or early in June. The building will probably be completed early in April, and it is thought that the plant will be installed and ready for operation a few weeks later. The output of the new plant is estimated to run from 20,000,000 to 30,000,000 shingles a year. Trackage facilities will be installed and the mill connected by spurs with the main railway.

The British Columbia Government has been asked to send an exhibit of forest resources to the Forest Products Exposition at Chicago in April. It is believed the invitation will be accepted in view of the fact that the new tariff has given opportunities for selling the lumber product of this province in the United States, especially in competition with yellow pine.

Sudbury Company's Splendid New Plant

Modern Equipment and Fine Buildings of the Laberge Lumber Company, Ltd.
—Rebuilt in Three Months After Fire last April.

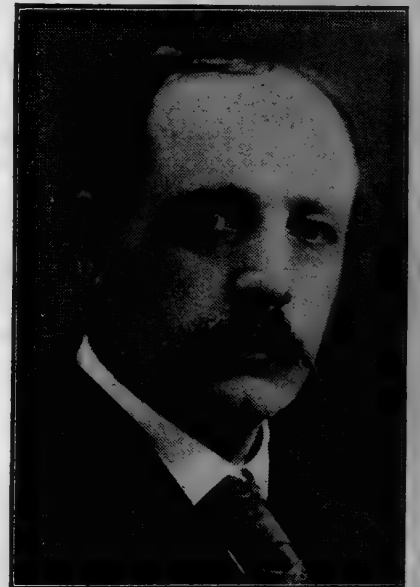
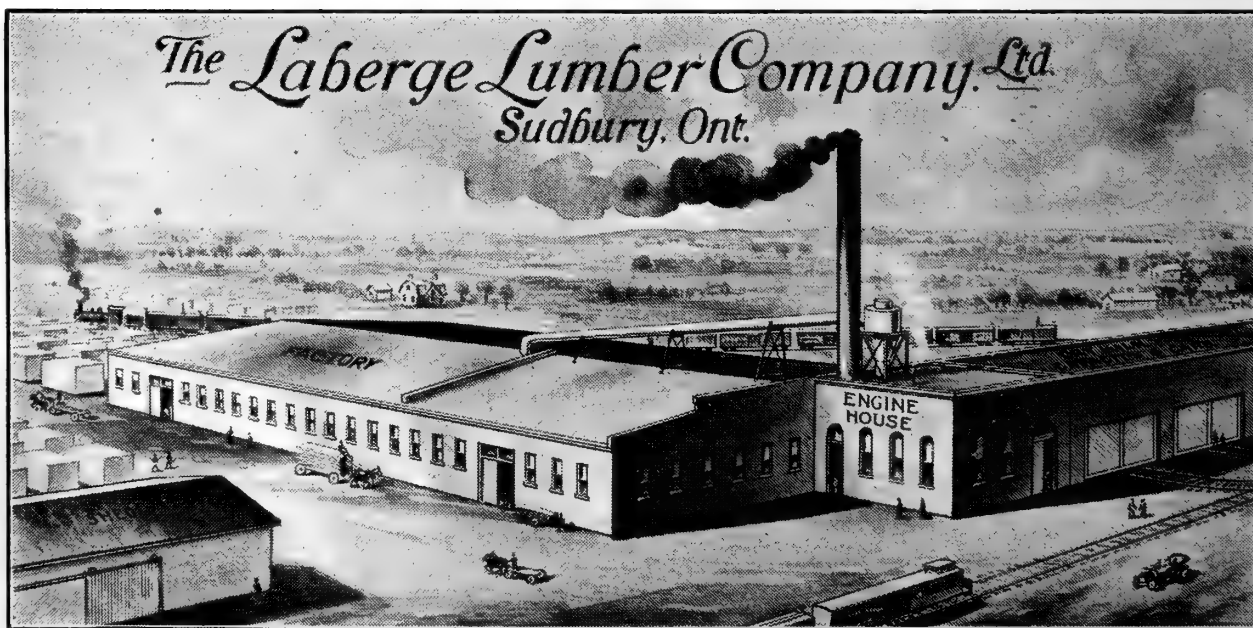
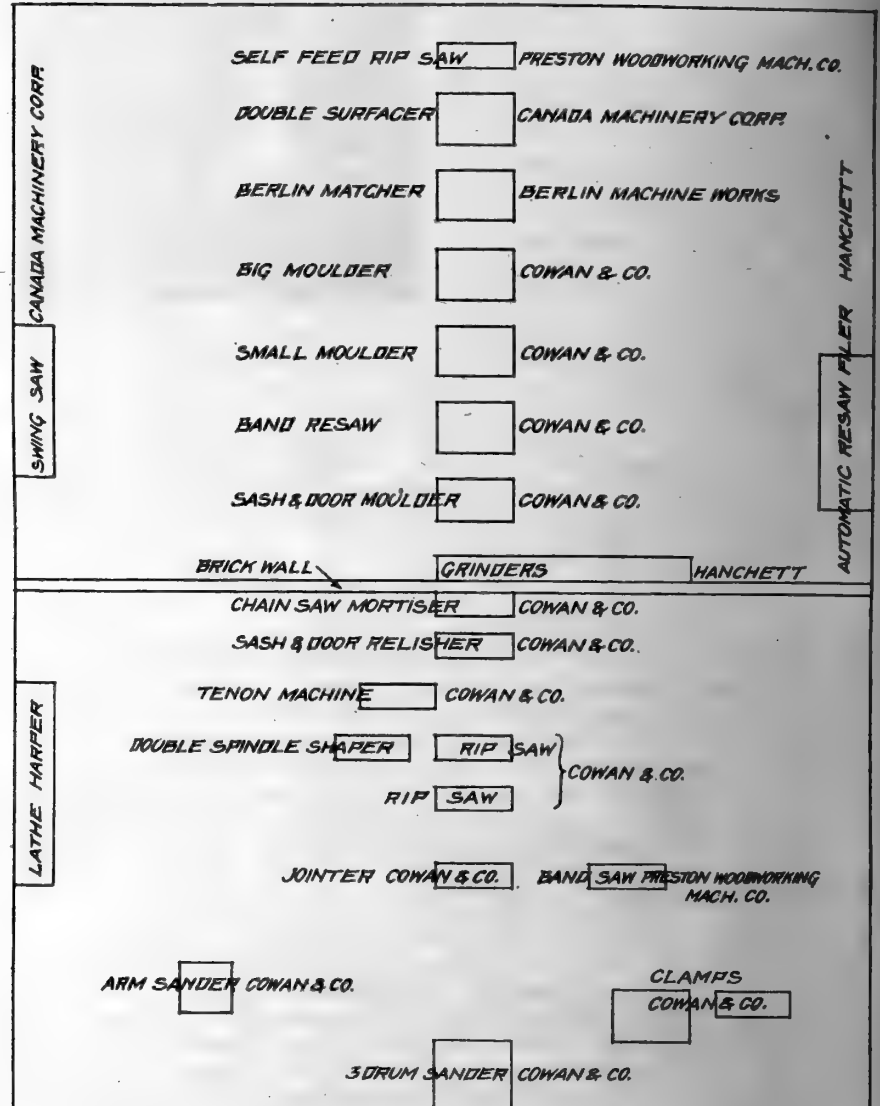
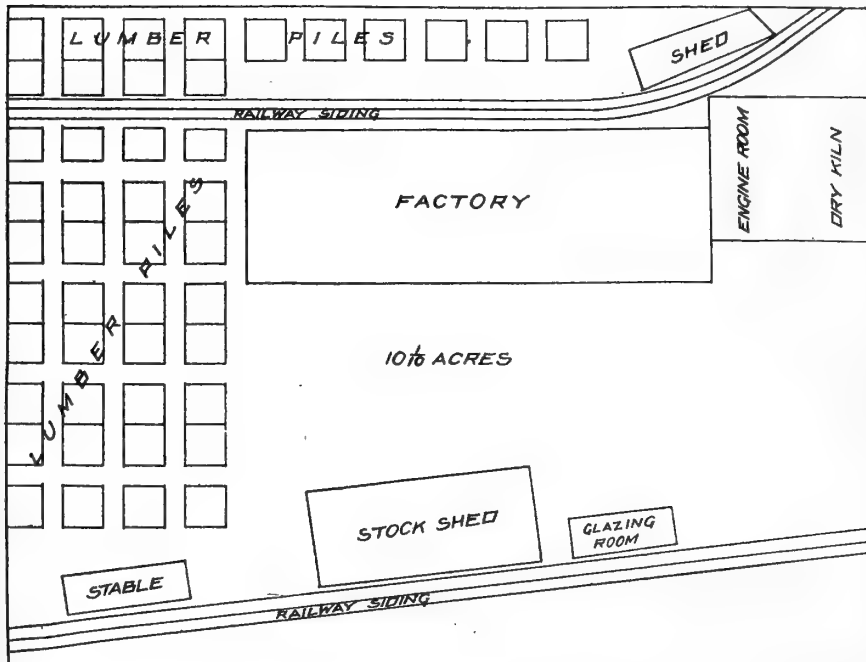
Lumber travellers who visit Sudbury, Ont., will immediately recognize the accompanying illustrations, which represent the interesting new plant of the Laberge Lumber Company, Limited, and a portrait of the president, Mr. J. B. Laberge. The illustrations tell their story so thoroughly that there is little need to go into detail in the form of a description. The following facts, however, will be of interest and will give those who may not be acquainted with this company some idea of its progressiveness and extent.

The plant occupies a splendid site covering ten and one-tenth acres along the new transfer tracks of the Canadian Northern Railway and abutting Notre Dame Ave. The buildings have been constructed in a most substantial manner. They consist of a solid brick factory, 90 x 144 ft., an engine room 48 x 66 ft., and a shavings vault, 16 x 66 ft., the latter building being constructed entirely of cement. In planning the buildings the company had in view, more almost than any other feature, the importance of using fireproof materials. All the buildings are roofed with fireproof roofing, and hydrants and standpipes have been installed at a number of places for fire protection.

Equipment of the Plant

To the visiting lumberman, the most interesting part of the plant is its excellent layout and equipment. The machinery includes one

band resaw, one self-feed rip saw, one double surfacer, one Berlin high speed matcher, one large moulder, one small moulder, one sash and door moulder, one swing cut-off saw, four automatic grinders, one Hanchett resaw filer, one chain mortiser, one sash and door relisher, one tennon machine, one double spindle shaper, two rip saws, one dado machine, one lathe, one band saw, one three-drum



J. B. Laberge, Sudbury, Ont.

sander and one arm sander. The layout of these machines has been studied with a special view to efficient working. Their location will be seen from the accompanying illustration.

The power for the plants is obtained from 150 h.p. engine and boilers. The buildings are lighted by electricity throughout, and heated by a hot-air fan-circulated system. All shavings are carried by fan to a solid cement shavings vault.

The erection of this plant occupied exactly three months, the first sod having been turned on April 1, 1913, and the plant having been in operation on July 2. Since that date the plant has not had an idle moment and has been running to its fullest capacity. On the average, 45 men are employed, and the annual wage list approximates \$50,000.

In the north country, the Laberge Lumber Company have worked up an excellent business. Their connection extends to Sault Ste. Marie and Chapleau on the west and touches practically every intervening point. The North Bay district and the Porcupine country are already large customers, and as quickly as the new Canadian Northern is being constructed to Port Arthur, shipments are being made to points along that line.

In addition to the manufacturing business above outlined, the company conduct a large wholesale department and a contracting department which have been doing splendid business throughout New Ontario for some time.

Officers of the Company

The president of the company, Mr. J. B. Laberge, was formerly superintendent of the Mond Nickel Company at Victoria Mines. He occupied this position for four years, devoting his attention to the building, sawmill and lumber departments. Then he took a position as superintendent for the Canadian Copper Company, having charge of their building and lumber departments for another period of four years. In 1900 Mr. Laberge started business for himself as a contractor and in 1902 added a lumber yard and a complete line of building supplies.

The secretary-treasurer of the company, Mr. J. A. Laberge, is a son of the president and started in business with him in 1902, since when he has been continually employed in this manner. Mr. J. A. Laberge is a graduate of Rigaud College.

Mr. H. Aurie, factory superintendent, was formerly in the employ of the Sudbury Supply Company for a period of seven years, after which he was three years in the position of factory superintendent for the Empire Lumber Company.

Fraser & Co. Will Move Deschenes Mill

Fraser & Company, Ottawa, Ont., are contemplating the removal of their Deschenes mill to Grand Lake Victoria, in the province of Quebec, near the head waters of the Ottawa, Lievre and Gatineau rivers. The removal, however, will not take place until the North Railway is built. The North Railway Company has a charter to build a line between Montreal and a point on the Grand Trunk Pacific. This line will touch both Grand and Rabbit lakes. Fraser & Company may locate their mill at the latter place. At present, however, they have surveyed a mill site at Grand Lake, which has been approved by the Quebec Government. If the North Railway Company does not proceed, Fraser & Company hope to persuade the Grand Trunk Pacific to build a branch into Rabbit lake. Failing this, the limit holders of the district have a charter to build a branch to either Grand or Rabbit lake. The North Railway Company, however, are pretty confident that they will commence construction during the coming spring. Fraser & Company are forming a milling company to take over their mill and have succeeded in interesting the other large limit holders of the district. The company will be in a position to saw for each firm interested, or to buy logs or standing timber from the shareholders of the milling company. The shareholders will include representatives of the holders of upwards of 800 million feet of pine and a considerable quantity of spruce. The quality of the timber will be particularly good, being a virgin cut. The manufactured lumber will be disposed of in the same markets as Ottawa lumber.

Fraser & Company's mill is practically a duplicate of the St. Anthony Lumber Company's mill at Whitney, Ont. It has engine and boiler capacity to cut about 170 thousand feet B.M., per day, on a daylight run, and was built in such a manner as to facilitate removal when necessary. Fraser & Company expect to cut out, during 1914, most of their present stock of logs in the Ottawa river and will then cease operations on their limits on the main Ottawa, Coulouge and the Black rivers, covering an area of about 500 square miles. They will probably dispose of these holdings from time to time, to Ottawa river mills. In fact, they are now negotiating for the sale of a block of 170 square miles.

Mr. J. H. Acer, secretary of the Laurentide Company, Limited, has been admitted a member of the Montreal Board of Trade.

The Chief Sources of Logging Waste

Editor Canada Lumberman:

New York, Jan. 14th.

I am interested in a letter from the Hon. W. C. Edwards which appeared in your issue of January 1st, in which he states that he can think of but two real sources of waste in lumbering operations. I think of more than two. I have been actively connected with the elimination of more than two sources of waste in the spruce woods of the north and in the pine of the south, in pulpwood operations and in saw log operations. On one operation in North Carolina, I found that by increasing the used length of the tree by two feet the production in board feet could be increased by 4 per cent., without appreciable additional labor, or cost, or decrease in quality. The stumps averaged nearly a foot higher than necessary and the log length could be increased in the top on an average of over one foot per tree. The company operating acted immediately on my report and took action to eliminate this waste.

In the north, I have found the following sources of waste of sufficient importance for the companies interested to spend thousands of dollars in their elimination. The first and third are Senator Edward's.

1. Cutting logs in arbitrary lengths without consideration of quality.
2. Stumps cut higher than necessary.
3. Taking out crooked, limby and otherwise defective logs at a loss.
4. Large tops left in the woods.
5. The use of valuable logs in camp construction, for temporary bridges, skids, etc., when less valuable material was available.
6. Building skidways on soft ground so that bed pieces of value were pressed into and frozen into the ground and left.
7. The use of the axe where the saw could be used.
8. Large mature trees left standing which would rot before a second cut could be made.
9. Lodged trees left.
10. Logs cut up by swampers so as to be of unmerchantable size.

This is only a partial list, but by the elimination of these factors, I have seen the waste in a logging operation reduced from over 15 per cent. to less than 1 per cent.—D. E. Lauderburn.

Good Retail Outlook at Jarvis, Ont.

Editor Canada Lumberman:

Jarvis, Ont., February 16

The retail lumber trade in Haldimand and Norfolk during 1913 was good, particularly the custom trade and the trade in the rural districts. The farmers as a rule are prosperous and the old farm buildings of the early settlers now require renewal and up-keep which make good trade for the retail lumbermen. My business during 1913 was one-third greater than during 1912. Farmers had a fine crop in 1913 and I am looking forward to a prosperous trade in 1914. In retail districts a good crop furnishes a great stimulus and induces the farmers to improve their properties.

The only drawback to the retail trade today is the credit system which is still adhered to. This is a great handicap to the retailer, unless he has capital enough to meet the demands of the manufacturer who wants his money in fifteen or thirty days. The farmers who have grown up in Canada cannot understand the present prices of lumber. Their fathers burned better lumber than that for which they are now paying \$35 per thousand. Another drawback to the trade in lumber is the increasing use of cement. Where I sold two cars of cement five years ago, I am now selling from ten to twelve cars. Most of this takes the place of lumber. However, I am looking forward to an active trade during the coming summer. United States lumber stocks are coming into Canadian markets extensively and are competing seriously in price with the Canadian product.—J. C. Sanderson.

Cooperage Outlook Encouraging

Editor Canada Lumberman

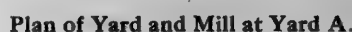
Chatham, Ont., Feb. 17th.

The only change in the cooperage market, at the present time, is that of the apple-barrel. Coopers are now beginning to place orders for stock, so as to get a start early in the spring, making barrels. The orchards throughout the western part of Ontario, are loaded with fruit buds. We have no report on the eastern part yet, except in one or two instances, and reports from these points are also very satisfactory. If nothing untoward happens, between now and the "setting" season, for the fruit, the crop will be above the average, but there is "many a slip 'twixt the cup and the lip."

What little winter we have had so far this year, has been this month. When we speak of "winter," we mean good sleighing. At our northern and eastern mills, we have had good sleighing, but very little sleighing around our western Ontario mills. From present indications, however, we expect to have better average stocks than last winter, although the timber is costing more.—The Sutherland, Innes Company, Limited.

Chamberlain Ave. Factory Rebuilt After Fire—Now Equipped with Latest Machinery—Fireproof and Thoroughly Efficient.

The British Columbia coast timber cut for 1913 exceeded that for 1912, according to a statement made recently by Mr. D. G. McKay, the Government timber inspector. Although the activity in the mills has not been as great as during last year there have been more actual logging operations. Forty-eight miles of horse trail were finished last Fall in the Campbell River and Salmon River Valleys, Vancouver Island. Telephone communication will be established by the Government in the early spring. The cable for the telephone from Heriot Bay to Shoal Bay has been ordered, and will be laid early next month. The Government intends to extend the telephone communication next year farther north.



The Electric Tractor in Sawmill Service

How a Large Southern Manufacturing Company Solved One of Its Problems and Reduced Operating Costs by Using Electric Mules



Electric Tractor in Saw-Mill Service—on the tramways



Electric Tractor in Saw-Mill Service—Side view of Tractor

Every manufacturer of lumber and many owners of large retail yards are keenly interested in the problems connected with the transfer of stocks from a mill to the yard or from one part of a plant to another. A great deal of the cost of the production of lumber is the result of transfer expenditures and any plan which will either reduce these costs or make transfer operations more efficient is of great importance. For this reason, the accompanying illustrations will be interesting to many of our readers. They show how problems of this class have been solved in connection with a large lumber manufacturing plant in the Southern States. The Industrial Lumber Company operate a sawmill with a daily capacity of 300,000 feet at Elizabeth, La. The company have always adopted the most modern ideas in connection with their operations. To illustrate this we may mention that they utilize six large freight engines and 75 flat cars in moving their logs from the forest to the mill. The plant employs about 1,000 hands, nearly 50 per cent. of whom are negroes. Throughout all their operations "efficiency" is their watchword, from the felling of the trees to the moving of the lumber in the yards by their new electric "mules." Even the bark and strippings from the sides of logs, which in most mills are carried to one end of the yard and burned, are, at this mill run through a "hog" (a large electrically driven, high-speed cutter) which shreds the material, which is then conveyed to turpentine boilers or vats where the turpentine is extracted from the wood by a process of steaming. This is mentioned merely by way of indicating what we mean by stating that "efficiency" is the company's watchword.

The trees, after being sawn down are cut in half and pulled from the forest to the side of the track by a large steam derrick which can pull four logs from four different directions at the same time. From the side of the track the logs are loaded on the freight cars by a mechanical loader which travels on the standard gauge track. The train of loaded cars is then run back to the mill, where the logs roll by gravity into the mill pond. From here they are carried to the mill by

an endless chain. About 25 per cent. of the output goes to the timber docks where it is shaped abroad, or to American users requiring heavy timbers. The dry kilns take about 15 per cent. of the output. One of the accompanying illustrations shows lumber from the kiln being towed to the storage sheds at the other end of the yard. The balance of the lumber is piled on the stacks and put through the planer. The moving of this lumber formerly required about 20 mules and a corresponding number of men. This was an expensive operation and the company set itself to consider how to reduce the cost. The result was that an electric tractor was built for the work.

The General Vehicle Company Inc., Long Island, N.Y., were entrusted with the production of the electric tractor. Although it was not exactly a new proposition to them, it was the first time to their knowledge that an electric tractor had been adapted to operating conditions of this kind. The general specifications called for something which would handle quickly from 2 to 4 tons of lumber, something which would load and unload very quickly, and yet be simple in operation and inexpensive to operate, at least from the standpoint of labor. Freedom from fire risk was also a consideration. The requirements were met by building a tractor of the following specifications:

Chassis rating ..	Two-ton.
Battery	44-17-G. V. Lead.
Motor	G. E. 1026—85 V.
Controller	S-35.
Wheelbase	54 inches.
Frame	4-inch rolled steel channel.
Wheels	Artillery type on Timken.
Tires	Front, 28 x 4 in.; rear, 28 x 3½ in., dual.
Countershaft	Housed type on Timken.
Brakes	Internal expansion on rear wheels.
Springs	Half elliptic, front and rear.

As will be noted from the illustration, the battery is mounted on the top of the chassis, the driver's seat is at the rear of the battery,



Electric Tractor in Saw-Mill Service—Towing to Storage Sheds

the controller is at the driver's left hand, while the brake lever is operated by his right foot and the bell by his left foot. The cradle is supported by a steel extension from the chassis frame and rests on a substantial revolving block held to the supporting members by a king bolt which passes through.

The lumber is first loaded on the standard two-wheel lumber dolly and is connected to the tractor by backing the tractor under the load, a chain being thrown around the lumber back of the first crossbar on the dolly and in turn attached to the end of a cable which passes through a guide bolt near the king pin and around the drum of a standard Sprague hoist. The driver presses a lever on his left and the hoist operates the cable, which tightens the lumber to the dolly and holds it securely to the rear bolster.

In moving lumber from the mill to the lumber stacks the tractor has a capacity of $7\frac{1}{2}$ round trips (2,400 feet each) per hour, towing an average of 1,500 feet of lumber, or 3,375 tons. In this work one tractor replaces five mules and three men.

This big mill has about 5 miles of tramways, running from the mill to all parts of the different yards. Tramways are from 16 feet to 20 feet wide and are floored with 3-inch timber. At the mill the tramways are about 20 feet from the ground, sloping to about 4 feet at the opposite end of the yard. The tramway lumber is worth \$13 per thousand board feet and costs \$5 per hundred for laying. These figures are important, as the mules' shoes necessitated the renewal of this lumber every three years at a cost of \$25,650. Obviously rubber tires will show a big saving in this item alone.

After the lumber is dried, it is moved from the lumber stacks and dry sheds to the planing machines and then loaded into freight cars, located from 60 to 1,000 feet away, either by hand or by the tractor. This work is considered very hard on the mules and difficult for the truck, as the hauls are very short and the roads tortuous. The truck has to go between the planers and in other narrow places and into the drying sheds, where it is necessary, sometimes, to back down a long narrow aisle. It is in this class of work that the tractor shows the largest saving, due to its flexibility of operation in the smaller spaces and the ability to load and unload quickly. In such work one tractor displaces 7 mules and 5 men, making 13 round trips per hour, with 1,100 feet of lumber per trip. The average distance covered per round trip is 2,000 feet. In transferring lumber from the dry kiln to the dry sheds, one tractor will do in two hours work that usually takes two mules all day to do.

Tractors vs. Mules—Cost of Operation

Three tractors and six men take the place of sixteen mules and twenty men, and the expense works out as follows:

INVESTMENT.		Mules	Tractors
16 mules at \$2.25 each	...	\$ 3,600	
20 sets harness at \$25 each	...	500	
20 2-wheel dollies, with shafts, at \$25 each	...	500	
3 electric tractors with (G. V.) batteries at \$2,900 each	...		\$ 8,700
Stable, grain, horse, blacksmith shop, etc.	...	3,000	
Garage, charging apparatus, etc.	...		1,000
Total	...	\$ 7,600	\$ 9,700
FIXED CHARGES		Mules	Tractors
Interest	...	\$ 228	\$ 291
Depreciation	...	1,140	1,020
Fire insurance	...	100	87
Total fixed charges per year	...	\$ 1,468	\$ 1,398
OPERATING COSTS		Mules	Tractors
Renewals of batteries (every year)	...		\$ 867
Renewals of tires (every year)	...		600
Renewals of chains, gears, etc.	...		375
Feed, shoeing, stable help, etc., at \$20 per month per mule (16 mules)	...	\$ 3,840	
Labor	...	10,500	3,600
Repairs to tramways	...	8,550	4,275
Total operating costs per year	...	\$22,890	\$ 9,717
Total costs per year	...	\$24,358	\$11,115
Saving per year by using electric tractors	...		\$13,243

No current has been figured in the operating costs of the three tractors, as the amount used is not considered of any consequence. Assuming that a mill were to buy current from the central station at 4c per kw.h., the cost would not average over \$200 per tractor, or \$600 in all.

Operating costs of tractors are given with G. V. conservatism, as the figures include battery, tire, gear and chain renewals each year. The load is towed, not carried, and this should favor tires and other parts which show rapid depreciation in heavy haulage.

Three Fine Elm Logs

The accompanying illustrations represent an interesting load of elm and basswood logs taken out by the Fassett Lumber Company, Fassett, P.Q. These logs were taken out before the fire, which destroyed the company's former plant and the exact figures relating to



A Fine Load of Elm and Basswood Logs—Fassett Lumber Co.

them were destroyed in the fire. The company advise us, however, that according to recollection, the three elm logs shown in the illustration produced a total of 3,930 feet, 22 per cent. of which was No. 2 and No. 3 common, the balance No. 1 common and better. Of this



Elm Lumber Produced from Three of Above Logs by Fassett Lumber Co

total, 1,400 feet was sawed into 2-inch No. 1 common and better. The top end of the smallest of the elm logs measured 42 inches in diameter, and the top end of the butt log measured 54 inches in diameter.

Exports of forest products from Canada were smaller in 1913 than during the preceding year, although slightly larger than in 1911. Total exports of forest products in 1913 were valued at \$42,875,089; in 1912, \$48,112,393 and in 1911, \$40,654,422.

The Canadian Northern Railway has taken a progressive step in connection with the prevention of fire along its lines by the appointment of Mr. William Kilby as Fire Inspector. Mr. Kilby is to have general charge of all phases of the company's fire protection work. This practically involves the creation of a new department in the company's organization. This includes right-of-way clearing, fire patrols through timbered country, and the construction of fire guards through prairie sections in Alberta, Saskatchewan and Manitoba. The prosecution of these lines of work is required by the Railway Act and the orders of the Board of Railway Commissioners. The Canadian Northern is the first large railway company to organize a special department to handle fire protection work.

The Health of Ontario Lumber Camps

Provisions and Working of the Provincial Public Health Act—How the Lumber Jack is Protected

By John W. S. McCullough, M. D.

The sanitary conditions of the lumber camps in Ontario are of special interest, the operations being carried on mostly in unorganized districts extending from the Ottawa River in the east to the western boundary of the province, covering a territory of about 1,200 miles long by 200 or 300 miles wide.

In this territory there are each season from 500 to 600 camps with from 20 to 30 to 100 men each—in all, between 20,000 and 30,000 men. A large proportion of these employees, especially along the north shore of Lake Huron, come from the Province of Québec, while farther west, many of them are men from the Maritime Provinces, and stay over for the winter on their return from the harvest fields of the Northwest. These men, being far from home and the conveniences of the settled portions of the country, must be supplied, at least, with the necessities of life, by their employers, and among these, medical or surgical aid in case of illness or accident.

In order that illness may be lessened as much as possible, regulations under the Public Health Act are provided. These regulations have been in existence for many years and have been amended from time to time, as found necessary, until now, under the recently revised Act they are very complete.

The enforcement of the regulations comes under the duties of the owner, manager, agent or foreman of the camp, but has been largely attended to by the efficient medical and sanitary inspectors of the Provincial Board of Health. For several years the work has been done by Dr. R. W. Bell, Provincial Medical Inspector, and Mr. George E. Young, Provincial Sanitary Inspector; but since the appointment of District Officers of Health, under the new Act, these officers in the territories mentioned will aid greatly in the work.

On the establishment of a camp, the owner is required to notify the Provincial Board of Health of its location, name of foreman, means of access to camp, average number of men in it, name and residence of physician contracted with and whether he is located in camp or not, date of contract and duration, also copy of contract, and whether a permanent or tent hospital is provided.

The Contract Physician's Duties

The contract physician is required to take sanitary supervision of the camps and make at least a monthly inspection, reporting to the Provincial Board of Health, furnishing with his first report a pen or pencil sketch of the camp, showing the location of the camp buildings, distance apart, location of water supply, slopes of ground with drainage, etc. The contract may only be for sanitary supervision and, if so, is paid for by the owner, who is, however, liable for any expense incurred by any employee for maintenance and medical attendance necessary on account of any illness developing in or traceable to his residence in the camp. However, that all the expense may not be shouldered by the firm or owner, provision is made that the contract may also provide for attendance and medicine, etc., and in this case an amount not to exceed one dollar (\$1.00) per month can be legally retained from each man's wages to be paid to the physician "without deduction," the camp owner providing hospital accommodation and maintenance.

This latter form of contract is most usual. In most cases 50 cents per month is the deduction, especially in the eastern section of the province, while farther west in the Fort William district 75 cents, and in the Lake of the Woods district \$1.00 per month is deducted. In the latter cases the physicians usually provide hospital accommodation. Communicable diseases must, however, not be taken out of the camp, and must be isolated in camp hospitals, and the same measures adopted to stamp them out as provided for by health authorities in organized municipalities. Every employee shall, when requested, furnish the officer of the Provincial Board of Health with a certificate of successful vaccination within the preceding seven years, and the camp may be quarantined until such certificate is furnished.

Location of Camps

No camp shall be erected nearer than 100 feet to any lake, stream or other water, and the regulations provide for the proper construction and sanitary conditions of buildings, lavatories and closets, etc. Bunk houses shall contain 600 cubic feet of air space for each occupant, and bunks run parallel with the wall to prevent overcrowding, the lower ones being raised about a foot above the floor. Pole floors have been abolished and board or plank substituted and are usually scrubbed once or twice weekly, a disinfectant being used.

Adequate lighting and ventilation are required, to the satisfaction of the inspector.

A separate kitchen with dining room must be provided with proper conveniences for cleanliness and disposal of garbage at a safe distance (so deposited as not to create a nuisance nor to contaminate the drinking water).

A separate building for wash-house or laundry is required and with it proper facilities for bathing. Stables shall not be within 125 feet of the kitchen, and farther if necessary in large camps. Latrines and closets shall be located to the satisfaction of the inspector and maintained in a sanitary condition.

The necessity for these sanitary precautions is frequently ridiculed by some older lumbermen, but is easily understood when we find that many camps start operations in September, or even in August, in warm weather, while in former years work did not begin until snow was on the ground and everything was frozen up. In earlier days the employees were mostly farmers or farmers' sons from nearby settlements, and not many communicable diseases were brought in, but, with the present facilities for travel, a large majority come long distances and from cities where these are prevalent and greater precautions have therefore to be taken. On the first appearance of any of these diseases, the Provincial Inspectors at once step into the breach and see that every precaution is taken to prevent any further spread.

Nearly all employers are awake to the necessity, in their own interests, of preventing illness amongst their men, and in few instances have the penalties of the Act to be enforced. As a result of their co-operation with the officers of the Provincial Board of Health, the comfort and the health of the employees has been very much improved in recent years.

Veneers Increasing in Favor

At the recent annual meeting of the National Veneer and Panel Manufacturers' Association, the president, Mr. C. T. Jarrell, in his address, said there was no question that the use of veneers and built-up panels was greater to-day than ever before and that new avenues were constantly being opened up for their use. The idea that veneers and goods manufactured of veneers are inferior had been superseded by the knowledge that for quality, beauty and utility, products of the veneer mills must be used. Prejudice against certain woods that had formerly been considered practically worthless had almost entirely disappeared, and buyers as a rule were willing to pay fair prices for satisfactory stock and were suspicious when abnormally low prices were quoted.

Liverpool and Manchester Stocks

H. W. Lightburne & Company, Liverpool, Eng., furnish the following report upon Liverpool and Manchester stocks on February 1st:

Spruce and Birch									
Month Ending 31st January, 1914									
Liverpool									
	Import			Consumption			Stock		
	1911.	1912.	1913.	1911.	1912.	1913.	1911.	1912.	1913.
N.B. & N.S. Spruce & Pine, Stds. . .	2,640	1,880	1,660	3,480	3,040	2,650	4,730	2,590	6,740
Birch Logs, Loads	0	60	60	60	140	220	320	780	140
Birch Planks, Stds.	242	152	97	249	127	382	467	697	612
Manchester									
Spruce, Stds. . . .	1,330	2,380	750	4,460	1,650	4,280	9,740	8,350	14,310
Birch Logs, Loads	0	0	100	60	20	140	100	440	300
Birch Planks, Stds.	18	18	36	61	48	127	73	509	479
Stocks in Manchester and Liverpool Combined									
Spruce									
	1910.	1911.	1912.	1913.	1914.				
Manchester	11,040	10,380	9,740	8,350	14,310				
Liverpool	5,880	6,680	4,730	2,590	6,740				
	16,920	17,060	14,470	10,940	21,050	Stds.			
Birch Logs									
Manchester	140	0	100	440	300				
Liverpool	400	0	320	780	140				
	540	0	420	1,220	440	Loads.			
Birch Planks									
Manchester	1,133	279	73	509	479				
Liverpool	612	261	467	697	612				
	1,745	540	540	1,206	1,091	Stds.			

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 20th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-tf

Wanted

500,000 feet 1-in., 1½-in. Soft Elm.
700,000 feet 1-in. Basswood, Ash and Birch.
For delivery as soon as dry this year. State what you can supply and lowest prices on cars.
Box 945, Canada Lumberman, Toronto. 3-8

Wanted

Several cuts of good Maple and Beech to be sawed during Winter and Spring of 1914 in District between Georgian Bay and Toronto, also stocks of Birch from Muskoka District. Box 964, Canada Lumberman, Toronto. 4-7

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Wanted to Buy

500,000 ft. log run, sawn Hard Maple, various thicknesses, M. C. out. Must grade proper percentage 1S and 2S and No. 1 Common and not to exceed 20 per cent. No. 2. Will pay cash when loaded on cars; or will buy good Maple logs in the round, 12-in. and up diameter.

Write P. O. Box No. 1595, Montreal, giving best price and rate of freight to Montreal. 2-tf.

Wanted to Buy

4/4 White Basswood,
4/4 12-in. and over wide Soft Elm.
Round Rock Elm Logs 12-in. and up diameter, 20 to 35 ft. long—admit 10 per cent. good white gray elm. Any station in Canada. Also square Rock Elm timber.
Highest prices. Spot cash.

HALL BROS.,
Manufacturers and Wholesalers.
Toronto and Marmora. 4-7

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

1 x 1 x 42.
1 x 1 x 48.
1 x 1½ x 42.
1 x 1½ x 48.
1 x 1¾ x 42.
1 x 1¾ x 48.

Require Thickness, 1/16-in. Plump.

Quality—Free from all defects.

Can take delivery of green or dry stock.

Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc. 24-1-TF

WANTED FOR FACTORY USE

1-in. Black Ash Lumber, No. 2 C. & B., and also take the Culls; also 1-in. Basswood. State whether the stock is dry, well manufactured, and the point where it would be loaded on the cars. Immediate shipping instructions given. Apply immediately to Box 967, Canada Lumberman, Toronto. 5

Wanted to Buy

We want to buy 10 C/L Hemlock hds., clipped lengths; also merchantable spruce, 2 x 3, 4, 6, 8, 9, 10 and 12 in., 1 x 2, 1 x 3, and several Spruce frames. Cash business. We will contract with small mill with planer and matcher for entire output.

IMPERIAL LUMBER COMPANY.
Boston, Mass., U.S.A. 5

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft. P. O. Box 392, Ottawa, Ont. 3-tf.

For Sale

60,000 ft. 5/8 in. x 4 and up Common and Dressing Spruce.

Close prices for prompt shipment.

The Elgie & Jarvis Lumber Co., Ltd.,
Toronto, Ont. 5

For Sale

Cut of Hemlock near Ottawa. Will manufacture to suit buyer.

HALL BROS.,
Manufacturers and Wholesale Lumber Merchants

Marmora and Toronto. 4-7

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.

375 Pieces 1 x 15 and up 24 ft. Cypress.

Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que. c

Lath

We have a quantity of hemlock and pine lath ready for immediate shipment.

The Fletcher Pulp & Lumber Co., Ltd.,
Sherbrooke, Que. 5

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,
1-t.f. Janesville, Wisconsin.

Cedar Poles

Quantity of 25 ft. to 36 ft. Peeled Poles, ready for immediate shipment, F.O.B. cars, G. T. R., Sherbrooke, Que.

The Fletcher Pulp & Lumber Co., Ltd.,
Sherbrooke, Que. 5

Wanted-Machinery

Wanted

Half-inch boom chain. Schroeder Mills and Timber Company, Salines, Ont. 4-5

For Sale-Machinery

A Bargain

44-inch Wick Gang for sale at a bargain. In first class shape. Apply,

Fraser Lumber Company, Ltd.,

2-7

Plaster Rock, N.B.

For Sale

Thirty Standard Gauge Flat Cars in good condition; will pass M. C. B. inspection; 30 ton capacity, equipped with air brakes.

JOHN J. GARTSHORE,
Toronto, Ont. 5-6

For Sale

Waterpower, circular sawmill in Parry Sound District, 1½ miles from railroad siding, together with 300 acres timber land. Would be excellent site for manufacture of wood specialties. For particulars address Box 974, Canada Lumberman, Toronto. 5-5

Mill Machinery For Sale

Complete saw mill plant for sale including two single cutting band mills, gang, and all equipment in first class working order. For particulars apply to the Dickson Company, Peterboro, Ont. 5-8

Straight Moulder For Sale

One 8-in. Goldie-McCulloch Straight Moulder and Matcher in perfect running condition. This machine is better than new, as the bearings and all the working parts have been tried and kept in good working order. The owner is replacing with a much larger machine. Price low.

J. RODERICK & SON,
St. John, N.B. 5-6

WOODWORKING MACHINERY: 3 24-in. Champion planers, matchers and moulders; 4 20-in. Ideal pony planers; 3 30-in. Ideal bandsaws; 1 No. 18 Hespeler combination rip and cross-cut saw table; 1 Cowan panel raiser; 1 2½-in. Waymoth variety turning lathe; 1 12-in. MacGregor-Gourlay four-side moulder; 1 54-in. Jackson-Cochrane resaw; 1 32-in. disk sander with boring attachment; 22 Cowan veneer press screws. H. W. Petrie, Limited, Toronto, Montreal and Vancouver. c

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted as band saw filer, double or single cut. First-class references. Address Box 972, Canada Lumberman, Toronto. 5-7

Position wanted as Sawyer in Ontario or West on double cut or circular. Good references. Box 961, Canada Lumberman, Toronto. 4-5

Position wanted as Lumber Salesman for Province of Quebec and Eastern Ontario. Good references. Apply Box 971, Canada Lumberman, Toronto. 5

Position wanted as Bookkeeper or general office work, with a lumber firm. Best of references. Apply Box 970, Canada Lumberman, Toronto. 5

Circular Sawyer (married), desires position for the coming season, strictly sober and reliable. Long season desirable. Address Box 975, Canada Lumberman, Toronto, Ont. 5-5

Situation wanted as Sawmill Foreman or Superintendent. 28 years' experience with high capacity mills. Expert mechanic. Band mills a specialty. West of Winnipeg preferred. Box 958, Canada Lumberman, Toronto. 4-6

Saw filer, band or circular, wants position, 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 5-8

Forest Engineer wants position as Forester with lumber or pulp company. Graduate of Yale Forest School. Seven years' experience in Eastern and Western Canada and United States. Highest references. Box 1000 Canada Lumberman, Montreal. 5-5

YOU will reach YOUR man in applying to Box No. 960, Canada Lumberman, Toronto, if YOU are in need of an accurate and reliable Mill Accountant, for May 1st next. Eleven years' experience in lumber business. Highest references. Conversant with both French and English languages. Married. 5-6

First class right hand Band Sawyer wants to change. Now employed in one of the largest and fastest mills in Pennsylvania. Strictly sober and steady. 32 years old. First class recommendations.

D. RAY COLE,
Norwich, Pa. 5-5

BAND SAW FILER wants position. Twenty years' experience in United States and Canada. Can furnish gilt edge references. Would go where quality and quantity is wanted. Would expect highest wages. Single or double cut. Box 960, Canada Lumberman, Toronto. 4-7

Wanted-Position By Experienced Manager

To take charge of lumbering operations. Can get results and furnish the highest credentials. Canadian. Box 973, Canada Lumberman, Toronto, Ont. 8

Position wanted by experienced man as sawmill foreman. Could take entire charge of small plant. Understands handling men, and also lumber from stump to market. Have had twenty-four years' experience. Married man. Can give good references. Would take contract of sawing by thousand. Address Box 656, Haileybury, Ont. 5-6

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

Men for Sawmill Wanted—Engineer, fireman, sawyer, jacker, setters, tail sawyer, lath contractor, pilers and others for Band Saw Mill at Kearney, Ontario, for summer season. Cut is pine. State age, habits and firms previously employed with. None but men experienced in Saw Mills need apply. Apply J. J. Armstrong, Biscotasing, Ontario. 5-6

Business Chances

Wanted

party with from \$25,000 to \$100,000 cash to join the advertiser in the manufacture of a valuable timber property where the opportunities for making large profits are exceptional. Address Box 968, Canada Lumberman, Toronto. 5-6

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-tf.

If You Have a Son

whom you want to start in business, write stating the amount you are prepared to invest, his age, experience and capacity. This is an exceptional opportunity for the training and development of a young man, where the climatic conditions are perfect and the business opportunities unlimited. Address Box 969, Canada Lumberman, Toronto. 5-6

For Sale

Lumber Limits in Eastern Canada, 50,000 acres, large Sawmill, fully equipped going concern, on salt water. Correspondence solicited. Will be sold right to close estate.

Address, Timber Limits, care Canada Lumberman, Toronto. 22-t.f.

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. 22-t.f.

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

ESTEVAN, SASKATCHEWAN

Splendid opening for Planing Mill. Lumber Yard could be run in conjunction with advantage. 5,000 population; with large district to serve; cheap power, fuel, light, etc.; city growing rapidly, first-class business assured. Write immediately to the Secretary, Board of Trade, Estevan, Sask., Canada. 4-8

For Sale

Fir and Spruce Timber Limits in the vicinity of Fort George. Price right and terms liberal. Will be sold in quantities as agreed upon up to 45 square miles. Timber not excelled in British Columbia.

If interested apply for further information to D. J. McEACHERN, Alvinston, Ont. 3-6

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Hardwood Limit and Saw Mill For Sale

On account of our having recently purchased a large Hardwood Timber Tract in Mississippi, we have decided to offer for sale our Hardwood Mill, Boarding House and all equipment situated a few miles from Kearney, Ontario. The Limit consists of 16 square miles and it has been cruised by the best rangers in the North, and on close estimate it contains the following merchantable timber:

7,700,000 ft. Birch.
2,000,000 ft. Maple, Elm and Basswood.
4,300,000 ft. Hemlock.
1,700,000 ft. Spruce.
500,000 ft. White Pine.
750,000 ft. Cedar.

14,950,000 ft.

Besides thousands of cars of Charcoal Wood.

At present time we have:
450,000 ft. of Hardwood Logs.
500,000 ft. Hemlock and Spruce logs.

cut and on skids in the woods. The mill is circular and fully equipped with 90 h.p. engine and 150 h.p. boiler, double edger and trimmer. Also large Boarding House with all equipment, Blacksmith Shop and tools, Oil and store houses and everything that is needed in a going operation. This is one of the best propositions in the North and can be bought as running concern on most favorable terms. Here is excellent opportunity for man who understands the business to make good profit without taking any risk.

Terms, \$5,000 cash, balance arranged to suit purchaser, or would consider retaining part interest with right partner. Price and further particulars on application.

WILSON LUMBER CO., LTD., Toronto, Ont.

Miscellaneous**Coal and Timber**

Will purchase in large tracts only, either in Canada or the United States. We are principals and only deal with owners. No agents or options. Address "Cash," c/o Canada Lumberman, Toronto. 4-7

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company, Brantford, Canada. 22-t.f.

Axioms on Air

A pile of lumber is dry only when the centre of the pile is dry. This is as true of the pile in the kiln as it is of the pile in the yard.

The sides, ends, top and bottom of the standard pile dry more rapidly than the centre.

The remedy is: Pile the lumber in such a manner that the centre gets as much circulation as the outside.

Edge piling is the most positive; and the side pitch pile is next in effectiveness.

The medium for drying lumber is air, and this air, to be effective, must be in motion over the surface of the lumber.

Stagnant air takes up moisture very slowly, while air that is in motion takes up moisture rapidly.

Washing hung outdoors, even on a cold day, with a breeze blowing, dries very quickly, while washing hung in a closed room dries very slowly, even though the room be hot.

A pile of lumber through which the air can circulate freely will dry more rapidly and evenly than a pile in which the circulation is obstructed.

Lumber, especially sap, will mildew in stagnant air just as old linen will mildew in a damp corner.

Therefore, the main requisite for drying lumber is freely circulating air—air freely circulating through the entire pile.

Air cannot be confined in an inclined flue that is open at both ends.

Air will constantly move in an inclined flue that is open at both ends.



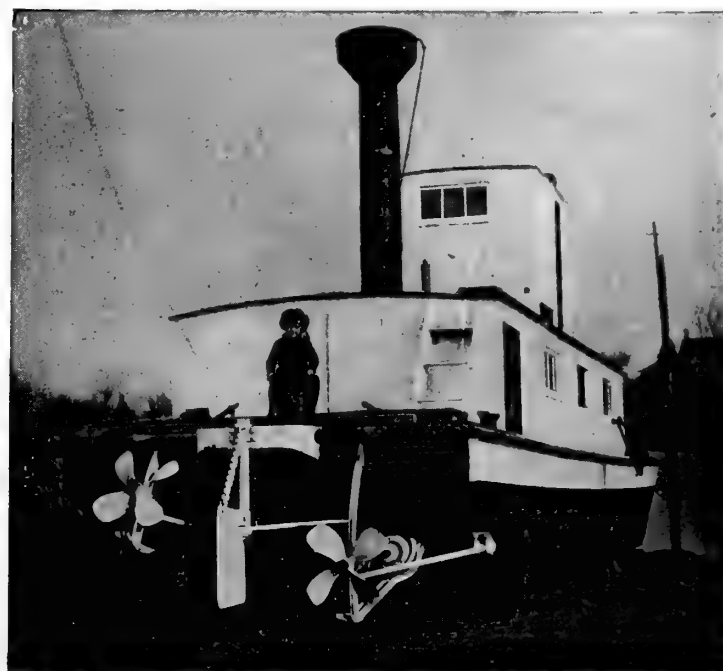
Montreal Engineering Co., Limited,
164 St. James Street,
Montreal.

Timber limits examined, cruised and surveyed. Waterpowers developed. Pulp and Paper Mills designed and constructed. Projects financed.

FOR SALE

- 1—46-in. No. 1 Wickes Bros. Gang with divided press rolls and oscillating slides, 20-in. stroke, 44-in. saws. Capacity 80 to 100 M. ft. per 10 hours. In first class running order.
- 1—54-in. x 22-in. Clutch Pulley for driving Gang.
- 1—30-in. x 22-in. Tightener with Boxes.
- 1—Wickes Bros. 9 saw Trimmer arranged to trim all lengths from 8 to 21 feet. No Saws. Only used one season and in good working order.
- 1—Heavy Allis Circular Saw Husk complete with 2 Parkhurst Saw Guides. All good as new.
- 1—Dunbar 2 Block 4 ft. rift Clapboard Machine with capacity 6 to 8 M. per 10 hours.
- 1—Dunbar double Clapboard Planer and Jointer.
- 1—Dunbar 2 Saw Trimmer.
- Clapboard Machinery only used one season.
- 2—Solid Iron Pulleys 84 x 13 in. face.

SHIVES LUMBER CO., LIMITED
Campbellton, N. B.

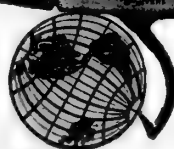


Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.



PEAVIES

Cant Hooks, Boom Chains, Timber Dogs

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

Review of Current Trade Conditions

Ontario

The trade outlook in Ontario shows encouraging improvement. Wholesalers report that they are booking a considerable amount of business already and that there are good prospects for steady trade expansion from now on. Lath are practically off the market. B. C. shingles are firm. Although the yards throughout the country seem to be pretty well stocked in shingles, there is a fair demand. Mill cull pine is very scarce and the demand is good, so that prices continue firm. The same conditions prevail in regard to dead culls. Hemlock is not showing any increased activity, as it is still obliged to face the strong competition of southern pine. It is holding its own in price however without difficulty. Spruce is quite strong, being held firmly by eastern mill men, who are now finding a better market in the eastern States. The demand for spruce continues good.

The lumber trade at Ottawa is still feeling the effects of the severe weather. A few good sales have been reported by Ottawa firms in Montreal and Toronto and in Northern New York. Prices in general are firm although pine box boards 1 x 4 in. and up, 6 ft. to 11 ft. are easier. Pine box boards 1 x 3 in. to 6 in., 12 ft. to 16 ft. are firmer.

Eastern Canada

The lumber trade at St. John and other New Brunswick points has been very quiet during the past fortnight, largely on account of the severe weather. This has been a favorable factor, however, in connection with logging operations and the present indications are that there will be plenty of water for the drives. The cut of logs on the St. John river this year will probably be about normal. Most of the mills have a fair amount of logs left over from last season's operations, so there is every likelihood that the mills will be well-stocked for the 1914 cut. Most of the mills which saw English deals have sold their cuts for the coming season at a slight advance on last year's prices. This advance will probably be used up however, in the payment of increased wages in the woods and the cost of supplies which has been higher this winter than formerly. Specifications running 50 per cent. 7 and 8 x 3 in., balance 9 x 3 in. and up are bringing about \$17 per M. No improvement is reported in the American market and buyers are not making contracts ahead for 1914. It is not expected that improvement will be shown in this market until the Interstate Commerce Commission has given its decision in connection with the application of the railway companies for an increase in their rates. Cuts of lath are selling at about the same price as last year.

Bad weather conditions at Boston have interfered with trade of late. Southern pine and North Carolina roofers are reported a little stiffer, but very hard to sell at the 50 cent advance. For 1½-in. spruce lath, the price is around \$3.75 or \$3.80. Shingles are weak, although prices are unchanged. Spruce frames are selling at \$24 or \$24.50, with an occasional report of a sale at \$25.

Hemlock boards at Boston are still moving slowly. The top price for eastern clipped hemlock is about \$23, although some dealers are asking \$24. As low as \$22.50 is sometimes being taken on car load lots. Stocks of hemlock at New York are low in the yards and enquiries are coming in and steadying the trade situation. Red cedar shingles from Vancouver are selling at \$3.65 to \$3.75 at Boston and there are rumors of a probable advance.

United States

The spurt which developed recently in connection with retail yard buying received a rather rude check during the second and third weeks of February when zero weather gripped most of the Northern States and hung on for several days. In reality, however, this is only a temporary affair as it had become fairly evident that the retail yards are generally short of stock and are looking forward to an active spring trade. An adverse factor has been the postponement until September of the decision of the Interstate Commerce Commission in connection with the application of the railroads for various increases in their freight rates. In the New England States it is reported that this has induced the railroads to remain out of the market. Reports from other districts, however, are to the effect that this will not have any appreciable effect upon the market as most of the railroads are buying in a quiet, but fairly steady manner, indicating that they are in need of supplies and intend to buy whether the increases are granted or not. Reports of building operations show a natural falling off in the larger centres, but in some parts of the country there are encouraging indications of increased operations where building activity has been rather quiet for a considerable period.

Weather conditions have been favorable for logging operations

in the north, but many mill men are still ignoring indications of increased business, which in former years they would have considered sufficient to warrant increased production. There is a fairly general tendency towards a restricted or at best a normal production. This does not apply however to the yellow pine districts, in which production is going on steadily. There is not, however, the former excessive over-production and there is sufficient firmness to the market to enable some millmen to add 50c or \$1 to their prices every now and then. These advances moreover, are as a rule willingly met by the consuming and distributing trade.

Hardwoods are continuing on their customary steady basis, both price and demand showing little alteration. Prices may not be altogether satisfactory, yet a tendency toward improvement is encouraging mill men to produce at a normal rate.

Logging operations in the Northern pine districts have been favored with excellent weather. Recent reports from Duluth tell of a contract sale of 15,000,000 feet of No. 3 common and better, the largest deal announced in several weeks. This stock goes to the Boston market. There is no excess of northern pine stocks. An active spring building trade is expected, although yards have not as yet been buying in a large way. Chicago dealers are expecting improved conditions as soon as the cold spell passes. Building permits are about normal, but much new building is in prospect. A feeling of confidence is spreading among the Chicago trade in general.

Great Britain

The lumber business at London continues on a quiet, but steady basis. F.o.b. business is increasing and looks fairly promising. The present stocks of deals and battens appear sufficient for the demands of the trade until about the end of May. At Foy Morgan & Company's recent auction sale, 3 x 9 in. third Montreal spruce was sold up to £11 15s.; second Quebec up to £12 10s.; Quebec fourths at \$11 10s., and 10 ft. and 11 ft. second Quebec brought £11 10s.

The recent reductions in the bank rate gave quite a stimulus to trade. This is expected to result very soon in greater business activity. Business at Liverpool is progressing steadily in nearly all branches of the whitewood trade. There is no evidence of a slump and the consumption of the most prominent articles is good, even as compared with the boom period in 1913. Stocks of spruce deals from St. John and Halifax have been reduced considerably and, at latest reports, stood at 6,700 standards. A large reduction was also reported at Manchester. The position of this stock, however, is more favorable than it was a few months ago. No transactions for next season's shipments had been reported, at latest advices. Both importers and shippers appeared to be in doubt about the freight market, which is the great factor in the future delivery business.

Trade in Canadian pine deals is quieter than it has been for many months. The consumption during January amounted to 550 standards, while the stock on hand at Liverpool at the end of January was 8,690 standards. The stocks were held by about two houses.

At Manchester, the import of spruce in parcels from Halifax and St. John has been below last year's figures, but the stock on hand is very much larger than it was a year ago. A fairly-satisfactory consumption however, is reported and it was expected that by the end of February the quays would be practically cleared of outstanding cargoes.

Trade at Glasgow has not been very active. Quebec shippers are now in the market and a moderate amount of contracting is reported to have taken place, principally in log timber and the lower grades of pine deals.

H. R. Pousette, Canadian trade commissioner in South America, is in Vancouver, B.C., to investigate the possibilities of extending the lumber trade of British Columbia in the southern continent. He reports that the best opportunity for Canadian lumbermen is in Chile, Peru and Bolivia. Chile and Peru import a large quantity of Oregon pine.

The Mountain Lumber Manufacturers' Association whose head offices have formerly been at Calgary, Alta., have selected quarters for their new head office at Nelson, B.C., and will move there about the middle of March. The offices will be in the Annable Block.

A large amount of British Columbia lumber will be used in the interior finishing and in the construction and equipment of the B. C. Provincial Building which is to be constructed in London, England.

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

BEAR IN MIND

That we saw all winter and always have large stocks of

Norway and White
== Pine Lumber ==

Large timbers cut to order, any length up to 60 feet, from Pine and B.C. Fir.

Headquarters for Norway Silo Stock.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

Cold Weather Helps New Brunswick Loggers

St. John, N.B., February 23rd (Special to the Canada Lumberman): The last two weeks have been a season of resting. The yards and factories are only fairly busy. Of course one of the causes of the cessation of business is the excessively cold and stormy weather which we have had and which has interfered with work. Should this weather keep up during the next two weeks it will cause a considerable loss to the building trades. While the cold weather and snow have been the means of slowing up work in the city, they have been of great benefit to logging operators, all of whom are getting well along with their hauling. By the first of March about all the logs will be off the yards and on the banks of streams and rivers. The cut of logs for St. John will be about normal. No calculations were made for any extra cut, many logs being held over by the mills from last season on account of the strike of the millmen which caused the mills to be idle for three months of last year. Prospects for driving look good. There is from 3 ft. of snow at the head of the St. John to 1½ ft. nearer the city, much of which is ice. This should cause a good flow of water. The cost of logging during the past season has been somewhat higher than last season, caused by increase in labor wages and in cost of supplies.

About all the mills which saw English deals have sold their cuts for the coming season, at prices which, while a little higher than last season, will not net the owner any more than last year's prices, as logs will cost enough extra to offset the increased price. Specifications running 50 per cent. 7 and 8 in. x 3 in., balance 9 x 3 in. and up are selling for around \$17 per M., with scantling at \$2.50 per M. less, and deal ends at two-thirds the price of deals. The larger proportion of deals have been sold to W. M. Mackay, who has purchased, it is said, Messrs. Randolph and Baker's and Messrs. Murray and Gregory's cuts. The balance of the cuts are held by John E. Moore and Geo. McKean.

The American market does not seem to improve, especially for the cargo mills, the buyers being very reticent about making any contracts ahead for 1914. It is felt that business will not improve to any extent until the Interstate Commission allow the railroads to increase their rates. This they have now held over until September 12th, when it is supposed that their decision will be handed down. The railroads are simply out of the market for lumber and are not making any purchases whatever. This is felt very much by the manufacturers, as the railroads have been the heaviest buyers in the past.

Cuts of lath are being bought ahead from the mills here at the same price as last year, viz., about \$2.75 per M. for the season's cut.

About all the mills are now being made ready for the season's sawing, which of course will not begin much before the first of April, but a large amount of repairs is always necessary.

Improvement Continues in Montreal Trade

Montreal, February 24th (Special to the Canada Lumberman): During the past fortnight there has been a continued improvement in the lumber trade. Business is increasing in almost every department, and the outlook is very good, especially for lumber for residences and flats. So far, the prospects for large buildings are not of great importance, but the probability is that contractors for houses will be very busy. On every hand there is a great demand for houses of the medium and cheaper descriptions, although to speak of cheapness in connection with Montreal houses is something like a misnomer.

Prices of lumber continue very firm, and some dealers are of opinion that quotations will advance when the spring comes. Stocks are scarce, and it is probable that, before long, dry lumber will be practically unobtainable. There is almost a famine in lath, due largely to the short cut last year.

The estate of the late Mr. J. H. Redfern is in the hands of a trust company, and is being gradually liquidated, in accordance with the terms of the will.

The Owens Lumber Company, Limited, have just completed a small mill at St. Amade, near Montebello, P.Q., with a capacity of about 12,000 feet per day. The mill is manufacturing hardwoods, principally birch, on the limits owned by the company.

It is understood that the pulp wood of the East Canada Power and Pulp Company, Limited, in liquidation, has been sold to the Donohue Company, Quebec. The pulp wood is in the yard of the mill at Murray Bay and also uncut on the limits on the Murray River and its tributaries. The sale was by tender, one of the conditions being

that the successful bidder may have, if desired, the use of the mill and mill property for the purpose of manufacturing the wood into pulp until the 1st September, 1914.

Ottawa Trade Continues Quiet

Ottawa, February 23rd (Special to the Canada Lumberman): The prolonged cold spell does not encourage immediate activity in the trade, but there are signs that when the weather breaks, things will begin to move again. Locally, trade is exceptionally quiet. Some fairly good sales have been made recently by Ottawa firms in Montreal, Toronto and an odd city or two in northern New York. Prices continue to remain firm with little prospect of changing in the near future. Pine box board 1 in. x 4 in. and up, 6 ft. to 11 ft. have gone off a dollar to \$17 and \$18, while the same class of boards in 1 in. x 3 in. to 6 in., 12 ft. to 16 ft. are a dollar firmer at \$19 and \$20.

A verdict for \$500,000 was given against M. J. O'Brien, of Renfrew, the well-known millionaire lumberman and contractor, in the Quebec Superior Court at Bryson, last week in favor of R. Rainboth, of Ayler, Que. The dispute was over some timber limits in Pontiac County, in which Mr. Rainboth sought to acquire a quarter interest as the result of a contract he made with Mr. O'Brien.

Mr. Rainboth claimed that, by the terms of the contract he made with Mr. O'Brien, he was to have a quarter interest in the limits, which are on the line of the Transcontinental Railway, providing a certain figure could be secured for them. Twice the limits were put up for sale by public auction, but the price offered was not as large as required. Later they were disposed of by private sale to Mr. O'Brien, and were pledged to the Merchants Bank for \$750,000 and a sum amounting to \$42,000 was paid out in Crown dues and other expenses. Seeing that the limits were pledged to the bank, which had power to dispose of them, Judge Weir, who tried the case, held that Mr. O'Brien had legally parted with the limits and as they are now valued at \$2,000,000, Mr. Rainboth is entitled to \$500,000, less his share of the \$42,000 expenses. The case will be appealed.

During the past week a controversy has been going on in the Ottawa newspapers concerning conditions in the lumber camps. Some lumberjacks, who have returned to the city recently have held that the camps are not sanitary and that the conditions in general are far from being as comfortable as they might be. The chief grounds of complaint have been poor food, low wages, and the high prices charged for clothing, etc. Denials to these charges have been made by the heads of leading firms, all of whom claim that the conditions in the camps are infinitely better than they were five years ago. As to the charges that the camps are not sanitary, the fact that they are under inspection of the provincial governments is cited. In short J. R. Booth, Shepard and Morse, and all the leading lumbermen say that the charges emanate principally from men who expect to find a lumber camp as well fitted up and as convenient as a first-class hotel.

H. M. Williams, of the Williams Lumber Company, is now in England on a two months visit, during which he will combine business with pleasure.

E. R. Bremner, local manager for Watson and Todd, left last week for England on business.

London Market Report

Churchill & Sim, London, England, in their monthly wood circular under date of February 4th, say that importations from New Brunswick during January, 1914, were as follows:—

Pine deals	3,000 pieces	against	Nil pieces in 1913
Spruce deals	30,000 "	against	27,000 "
Birch planks	16,000 "	against	13,000 "

The trade in pine deals was a small one in January and prices show no variation. Spruce has been going into consumption slowly. The stock is ample and buyers are holding off from further purchases at present. Some hardwood planks have been sold at about December rates, but the London demand generally leaves much to be desired. No change is reported in the market for British Columbia and Oregon pine. A few sales of long logs have been arranged for at about the last prices, but the demand has been disappointing.

Better Trade Situation at Liverpool

Smith & Tyrer, Limited, Liverpool, Eng., in their monthly market letter under date of February 1st say: The year has been ushered

SATISFACTION FOR SALE

OUR Lumber is manufactured with a Purpose. From the Stump to the Finished Product this Purpose is never forgotten. We aim to make our Products and Satisfaction synonymous. We want every car we ship to be filled not only with Lumber but with Satisfaction.

We are equipped to give you uniform grades—dry stock—fine planing mill work—good service and courteous treatment.

When buying of us, your worry, your anxiety, is over with the placing of the order. You know you will get what you want—in the way you want it—that upon arrival, you will be pleased. It will make your business a source of pleasure and happiness.

Try Fenderson Service During 1914

Begin Now. Address:

John Fenderson & Co.

Incorporated

Sales Office

27 Besse Place
Springfield, Mass.

MILLS AT

Sayabec, Que. Cedar Hall, Que.
Salmon Lake, Que. St. Moise, Que.
Jacquet River, N. B.

**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

in with a period of quiet business, but some revival of activity has been shown towards the end of the month, and the situation generally may now be considered on a better basis. Pitch pine.—Hewn timber is little enquired for. Sawn timber has firmed up somewhat as a reflex of the Pensacola troubles, but buyers are still shy, and some shippers are showing eagerness to realise their stocks. Freight continue very low. Prime lumber has gone much weaker; the slackness on the Continent has contributed to this. Lower grades are enquired for only to supply special orders. U. S. A. hardwoods.—There has been a quiet business done, without much change. Spruce deals have been steady but nervous. Stocks at the liner ports are sufficient, and buyers are afraid of shipments arriving too freely. Forward business has not yet seriously opened. Birch.—There is a fair demand for logs, but planks are not wanted. Hemlock can only be sold at low figures. Pine is unchanged, with only a quiet demand. Pacific coast woods are dull.

Liverpool Market Report

Farnworth & Jardine, Liverpool, England, in their monthly wood circular under date of February 2nd report as follows:—In the business of the past month there is little change to report. Arrivals generally have been moderate, the deliveries compare favourably with the corresponding month of last year, but the demand is not active, and stocks of some of the leading articles are too heavy. Prices are fairly maintained, but contracting for next season's supplies so far has been slow. Ocean freight rates quoted are moderate.

Canadian woods.—Pine timber.—There is no improvement in the demand to report, but values rule high; stocks are moderate. Waney pine, 1st, class: One small parcel arrived in Manchester. There has been a high consumption, and stocks, though slightly reduced, are sufficient; values are firm. Second class is only in limited demand; the present stock is ample. Red pine.—No arrivals; seldom enquired for. Oak.—The import (delayed in transit) is largely balanced by the consumption; the demand is not active, but stocks are moderate, and prices remain steady. Elm.—No arrivals; the stock is firmly held, but the demand is quiet. Values rule on a high basis. Pine deals.—About 400 stds. imported to Manchester. The consumption has been disappointing. Prices are steady, but stocks are adequate for probable requirements. Red pine deals are only in limited request.

New Brunswick and Nova Scotia spruce and pine deals.—The import to the Mersey (including Manchester) was fairly moderate, viz., 2,410 stds., against 4,260 stds. in January, 1913, and chiefly discharged in Liverpool. Deliveries have been large, and the stock, although reduced, is still too heavy. Values are unchanged. Pine deals are only in limited demand.

Birch.—Logs.—The import, chiefly from Quebec, amounts to 8,000 cubic feet, largely to Manchester. Stocks are light, and there has been more enquiry. Prices are firm. Planks reached this market in moderate quantities. The consumption has been good. The stock is not excessive, and prices are well maintained.

British Columbia and Oregon pine.—The arrivals amounted to 29,000 cubic feet, chiefly lumber. The consumption has been fair, but stocks are heavy. Prices are unchanged.

Sales during the past month have included the following:—Spruce deals from St. John, N.B., etc., liner parcels at from about £8 15s. to £10 per standard c.i.f. according to specification. In their "prices current," Messrs. Farnworth & Jardine quote as follows:—Quebec square yellow pine 2s. 9d. to 4s. per cubic foot; Quebec waney board pine 3s. to 5s. 6d. per cubic foot; St. John pine 18 in. average, 2s. 6d. to 3s. 6d. per cubic foot; red pine 2s. 2d. to 2s. 9d. per cubic foot; St. John birch 1s. 7d. to 2s. 2d. per cubic foot; birch planks 1s. to 1s. 6d.; St. John spruce deals £9 5s. to £10 per standard; spruce boards £8 5s. to £9 5s. per standard.

Quiet Trade at Boston

The Shepard & Morse Lumber Company, Boston, Mass., report that trade is very quiet in Boston at present. The weather has been exceptionally bad for building operations. Prices on low grade Southern pine and North Carolina pine roofers, for instance, have stiffened a little, but are very slow sale at 50c advance. 1½-in. spruce lath are selling at about \$3.75 or \$3.80. Shingles have been quite weak, although market prices have not decreased. The top prices however, are difficult to obtain and can only be secured for particularly fancy brands. Spruce frames have sold in some cases at \$24 and in others at \$24.50. There is not much moving at \$25 now.

Trinidad Market Active

Gordon, Grant & Company, Limited, Port-of-Spain, Trinidad, report under date of February 2nd as follows: Lumber—Our market being ready for further supplies, the recent arrivals of pitch and white pine will not in any way affect values. Active building operations afford a good outlet, and all descriptions are readily saleable.

Personal and Trade News

Mr. J. K. L. Ross has been elected a director of Laurentide Limited, to fill the vacancy caused by the death of his father.

Dr. B. E. Fernow, Dean of the Forest School of the University of Toronto, has been elected president of the Society of American Foresters.

Mr. William Price, president of Price Bros. & Company, Limited, Quebec, P.Q., expects that the present year will show a much improved business in the lumber department, but that the pulp trade will not be so active.

Mr. W. Booth, for some time secretary-treasurer of the Campbell-MacLaurin Lumber Company, Limited, Montreal, has been appointed secretary-treasurer of J. R. Baxter and Company, mill supplies, Montreal.

Mr. W. A. Anstie, managing director of the Forest Mills of British Columbia, Limited, Revelstoke, B.C., recently made a business trip in Ontario and was a welcome visitor at the offices of the Canada Lumberman.

Mr. W. E. Nitterauer, of the Munising Company, Munising, Mich., was in Toronto during the third week of February on a business trip. The Munising Company operates a sawmill, paper mills, mines, etc., on an extensive scale. They are considering important increases to their lumber output, during the coming year. At present they are turning out hemlock and hardwood and report that the competition of yellow pine with hemlock in Michigan is very strong.

At the annual meeting of Price Bros. and Company, which was held recently at Quebec, the report of the lumber department showed that it had made attractive profits on its year's operations. Satisfactory prices were received for the company's lumber output during the year. The company's total earnings at its various operations amounted to \$512,527. After deducting bond interest and maintenance charges, the net profits amounted to \$338,739.

Campbell-MacLaurin Lose Valuable Employee

The death occurred recently of Mr. William Dick, mill foreman of the Campbell-MacLaurin Lumber Company, Limited, Drummondville, P.Q. Mr. Dick was a Scotchman, and was at one time employed by Messrs. Muirhead and Sons, Grangemouth sawmills, Scotland, and later as general manager of the mill and yard of Messrs. Graham, Roxburgh and McLauchlan, Firhill Saw Mills, Canal Bank, Glasgow. In 1907 he came to Canada and was engaged by McLaren Bros., Buckingham, and in 1908 joined the staff of the Campbell-MacLaurin Lumber Company.

Moose Jaw Pioneer Lumberman Dead

Hugh McDougal, a pioneer lumberman, of Moose Jaw, Sask., who went west from the Ottawa Valley in 1883, removing from the prairie city to the Okanagan Valley in 1902, died at Peachland, B.C., on February 18th, aged 80. Mr. McDougal owned a lumber mill at Peachland for some years and was well known in the Okanagan. He is survived by a wife and grown-up sons and daughters, and leaves relatives in the Ottawa Valley, Moose Jaw, Vancouver and Victoria.

Lumber Mutual Present Good Report

The Lumber Mutual Fire Insurance Company of Boston, Mass., in their annual financial statement for the year ending December 31st, 1913, showed a net cash surplus of \$538,502.11. The total amount of insurance in force is \$19,810,579.49, upon which the premiums amount to \$442,290.26. The total losses paid to policy holders to date is \$1,237,461.64, and total dividends paid to policy holders to date \$1,139,203.84. The rate of dividend to policy holders on terminating policies is 40 per cent. The gain in the amount of insurance in force during the year 1913 was \$1,622,666.83, and the gain in premiums for the year was \$34,520.75.

New Brunswick Crown lands comprise an area of over 10,000 square miles, and the annual revenue to the province is over half a million dollars. It is proposed, in view of the extensive areas of pulp wood lands, to create a forestry branch in connection with the Crown Lands Department of the Province, which will be in charge of a technically trained forester.

Statistics issued by the provincial forest branch of the Department of Lands at Victoria, B.C., show that the cost of timber fire protection for the year 1913 was much less than for any previous year in the history of the department. The cost for fire protection during the first ten months of 1913 was less than \$8,000, as compared with \$30,000 in 1912, \$100,000 in 1910, \$45,000 in 1909, and \$35,000 in 1908. There were 900 fires during the season, only 96 of which could be considered serious.

Canada's Largest Saw Mill

Douglas Fir Timber

We manufacture and ship on short notice all sizes and lengths of merchantable timber up to 120 feet in length for derricks, scows, dredges, shipbuilding, bridge and structural timber. We dress timber up to 24 x 30.

Dressed and Matched Lumber

Write us for prices on rough or dressed clear fir and

cedar. We make quick shipment of clear fir flooring, siding, ceiling, shiplap and boards, also red cedar bevel siding.

Douglas Fir Cross Arms

Douglas fir base casing and mouldings manufactured to standard patterns at close prices, shipped with doors or cedar shingles.

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British Columbia Red Cedar Shingles

We make our own shingles and place our brand on them, which is our guarantee that they are manufactured fully up to grade with regard to quality of material, sawn to full thickness and tightly packed.

We want your permanent trade. Let us ship you one car.

B. C. Fir Doors Are Perfect Doors

We are now making 1000 perfect fir doors each day and can double this output on short notice. Our door sales are increasing rapidly and the reason is that we are making a perfect door with regard to quality of material and workmanship. Prices and information furnished on request.

Three ply rotary cut fir veneer makes beautiful panelling.

Canada's Largest Door Plant

Handling Mill Waste

At the recent annual meeting of the Retail Lumber Dealers' Association of the State of New York, an interesting paper on the handling of waste, was read by Mr. Henry T. Lumb. In the course of his remarks Mr. Lumb said:—

We have made a number of tests and while some have shown 16 per cent. and 12 per cent. and even as low as 8 per cent. waste, others go up to 19 per cent., 25 per cent. and 27 per cent., and in many cases even higher. This is based on all first and second grade lumber, which we have found best for our trade. The percentages have varied so that we have been using an assumed percentage of 25 per cent. except on North Carolina pine trim, where we use 15 per cent. as we get this out of stock widths.

I have recently written a number of other firms to get their ideas on the subject and received replies from a few as follows:

A—states: "We have not on hand now any data to furnish the information which you request. Of course you and ourselves realize that it is a very important part of our industry; that is, the waste in cutting up lumber. There are a great many mills, it seems to the writer, who do not recognize this fact. We have made test after test on different kinds of lumber, and find the loss in cutting up amounts to from 20 per cent. to 40 per cent., depending entirely on the quantity of the lumber you cut up, and also on the character of the work that you are cutting for.

In connection with cutting up lumber for trim, that of course depends upon what you are cutting up. Our idea as to the loss in cutting oak, for instance, is that there is about 30 per cent. loss, if one is cutting up a good grade, running about 50 per cent. No. 1 common and 50 per cent. 1's and 2's."

B—states: "Replying to your favor of the 19th, would say that the amount of waste in cutting lumber depends entirely on the quality of the lumber and we do not think that any fixed rule would be of avail."

C—states: "This depends largely on the kind of stock you use, and is rather a hard question to answer. We find quite a difference in some of the cutters; that is, some of our cutters waste more stock than others, and to give a definite amount of waste we are not in position to do so.

Some mills use a lower grade of material and think it is cheaper, while we find our experience has taught us that it is better for us to purchase a better grade of material in cutting trim, as we have much less waste.

We find also that some orders cut to better advantage than others, as we work up small strips, etc."

D—states: "Answering yours of the 19th, will state that we manufacture only veneered doors and buy only the better grades of lumber; in fact, we try to order our stock 75 per cent. 1's and 2's and 25 per cent. No. 1 common, for the reason that we have no way of working up our offals because we do not manufacture trim, blinds, sash, etc.

Even taking into consideration the above facts, we allow 50 per cent. on practically all woods except quartered oak, on which we allow 60 per cent. This percentage of waste we add to the actual amount of lumber determined by the cutting sizes."

E—states: "We think that in all good trim where we use the best of stock our actual loss in cutting is about 15 per cent., and where we use lower grades of stock to make a fairly good output the loss is about 30 per cent. All this, however, is not lost. We sell some wood and we use core lumber and have a surplus as a rule. We have had experts here to try to tell us what it costs to produce our output but nobody has yet succeeded and we have never been able to definitely ascertain it ourselves.

Formerly in manufacturing in a stock mill in Michigan which the writer owned, making all stock work, sash, doors, and blinds, our percentage of waste figured 25 per cent. on the sash and blind work, but the total loss figured only 10 per cent. and we used only No. 2 and No. 3 shop. Of course lumber was very much better those days than it is now, that being about ten years ago."

F—states: "We only handle sash, doors and blinds and therefore can only speak as to the waste incurred in cutting these items. Our experience covering a period of some thirty odd years has been that 30 per cent. of the cutting up grade of lumber like No. 1 and No. 2 shop or cuts No. 1 and No. 2 common disappears, often being put in the mill to work up. This may seem high but it is actually so, as we have demonstrated to our complete satisfaction time after time. It is a little less on the higher grades but not much unless you use stock widths, which it is very hard to do. This waste matter is something that the average mill man does not seem to appreciate or does not feel that it is important enough to spend much time on, but we consider it a very vital part of manufacture."

From the above it will be seen that there are many different ideas of the percentage of waste, and most of us are doing more or less guessing and are therefore probably not getting the price we should for our product. The point I should like to bring out before you is that all seem to be basing their waste on occasional tests, and I should like

to bring up for discussion the idea of keeping records for an extended period, say a year, on the waste of all orders. Perhaps someone has done this and his experience would be of great assistance in planning a systematic method for other firms to obtain their actual waste.

I have noticed considerable discussion of cost keeping, pertaining to overhead charges and distribution of labor, but I have not seen anything relating to exact percentage of waste of lumber. We are generally getting so that we have accounting systems that give us overhead charges down to a tenth of a per cent., but in the matter of material, which is by far the most important item, we are guessing. I think most of us are making tests of occasional orders and after the lumber is brought into the mill and cut into pieces and lengths required, we make allowance for pieces and strips left over which we expect to use again. This cannot be an exact basis, as we all know some jobs cut to better advantage than others, and some waste works into other orders and some which we expect to use is finally put into fire wood. Most of us are basing our estimate of waste on these occasional tests and I think by a careful study of the subject with a systematic method it can be improved on. Some firms charge all the material brought into the mill on the job regardless of the waste, but I do not think this is right. Probably we should not figure costs so close on our product that we should get much closer than either of the above mentioned methods, but I do think we should at least know exactly, as the records will help us in many ways in knowing the proper grades to buy and also how efficient our cutters are, and I do not think this can be obtained by occasional tests, but only by keeping records of all the material used for an extended period.

I really think the successful dealer who is operating a mill in the future is going to be the one who knows when to buy goods already manufactured instead of making them himself and in order to do this he must know his costs, which must necessarily include an accurate percentage of waste on his lumber.

My proposition is to keep a record of exact cut to size of all pieces in every job, taken from duplicates of all cutting lists, no cutter or any employee being allowed to use any material without a cutting bill or requisition. Our inventory at the beginning of each year with lumber purchased during the year will of course give us the exact amount of lumber brought into the mill, the difference between the two records being feet wasted on all kinds of lumber for the year. This will require no tallying or red tape among the employees in the mill but simply a clerk in the office.

In trying to apply this method to our own business, we think that in connection with our present system of billing our telephone girl could tabulate all the sizes from cutting bills systematically and not miss any. We thought instead of figuring the number of feet, board measure, in each piece, we would get up a card system with a card for all the different widths and thicknesses and different kinds of lumber and only put down the lineal feet. For instance, if there were 10 pieces of chestnut casing 1 x 5 7½ feet long, it would be put on a card headed "chestnut 1 x 5" and entered "75 feet." At the end of the month or year, if found necessary, we would reduce the total of all the lineal feet to board measure at one calculation. Now, the difficulty is going to be in getting the waste on the different kinds of lumber when different grades are used of one kind, such as pine. For instance where No. 1 pine cuts are used for doors and No. 3 pine cuts for sash and blinds, the waste from No. 1 which might be used in with No. 3 for sash, the clerk in figuring up the cutting bill of sash would not know whether to credit up as coming out of No. 1 or No. 3 cuts. I have thought this might be accomplished by crediting up to No. 1 cuts or No. 3 cuts what is known to have come from either of these grades and what there is a question about could be credited to a miscellaneous pine account. This would probably be such a small proportion of material cut that it would give very nearly accurate figures. Of course in lumber where all one grade is purchased, it would be simple. In connection with this, I might add that in return for the expense and trouble of this system we might consider that we will always have a perpetual inventory. After this method has been kept for a year with possibly a second year to check it up as to its relative accuracy, we could tell at any time our stock on hand and in case of fire it would be valuable to have.

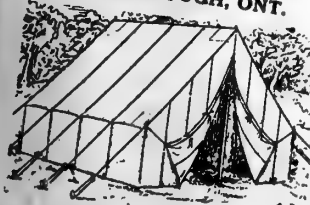
Now, would it be possible to apportion the waste credited to the miscellaneous account to the different grades at the end of the year according to the proportion of each kind used? Again, is it possible to work the whole matter of waste out on the cost of lumber basis? These are the two important parts of the proposition I haven't been able as yet to work out clearly myself, and I should like to hear some discussions from others on these two points and also the waste proposition on a whole.

A large amount of pulpwood and lumber is being shipped on the Transcontinental Railway east of Quebec bridge. The line is not yet complete, but will be by May. It is estimated that at least 10,000 carloads of lumber and pulpwood per annum will be carried.

Leading Firms

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A good Steel Range for Camp Use

Can be fitted to burn wood, coal or coke. Special price to lumbermen.
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ALGONQUIN STEEL RANGE.

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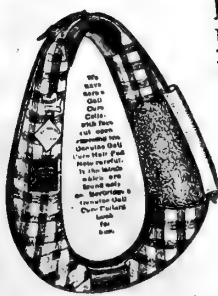
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Waterproof Permanent
Will not wash or rub off.

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A quick remedy for Cough, Broken Wind, Heaves, Colics, Worms and diseases of the Urinary Organs. It is a powder, not a liquid.

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Largest Wholesale Dealers
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"The Alligator Brand"
HARNESS, COLLARS
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Lamontagne Limited.
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Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Aerial Skidding

By Jno. A. McDougall, Fernie Lumber Co., Ltd., Fernie, B.C.

While undoubtedly there are minor matters in connection with the aerial skidder which we are operating which could be, and perhaps already have been, improved upon, we are of the opinion that this machine, owing to the comparatively small amount of rigging in connection with it, and the consequent minimum delay with which it can be moved around, is the most suitable machine for the class of timber and the rough mountainous country in which we are operating.

It is a four-drum machine, one drum containing 3,000 feet of one-inch cable, being the main line; one drum containing 3,000 feet of $\frac{3}{4}$ -inch cable, being the haul-in line; and one drum containing 6,000 feet of $\frac{5}{8}$ -inch cable, being the haul-back line. The other drum is intended for loading the logs onto the cars. We have not used it for this purpose, but have used it and found it very handy for skidding the trees onto the rollways to be cut into log lengths.

The machine is set up at the landing, the main line being run out and made fast to a suitable tail tree. In the event of the main line, after being stretched, sagging so as to come too close to the ground or striking the ground on account of the uneven nature of the country, one or more gin poles are put up and the main line is held up from the ground by one of the "C" hangers, the open side carriage being specially constructed so as to allow the bottom part of the "C" hanger to pass through it.

We have found that we can cut a swath 150 feet wide or 75 feet on each side of the main line and handle it expeditiously, but our operation being side-hill work we have not considered it advisable to try to go further away from the main line than that distance. We have operated advantageously with practically speaking the whole length of the main line—that is 3,000 feet.

The slack pulling arrangement is simple and effective consisting of some thirty feet of light chain hanging to the bull hook on the end of the haul-in line. The hook tenders carry a short length of chain, about three feet, with a swamp hook on one end and a chain hook on the other end; this is made fast to a suitable stump, handy to the main line, and as the carriage comes back from the landing the chain hanging from the bull hook is caught and made fast to the short chain, the carriage being allowed to go on into the woods until the necessary amount of slack has been secured.

We have found it most advantageous to fall the trees so that they will lie as nearly as possible at right angles to and with the top towards the main line; the carriage is then held stationary until the trees are up to the main line and clear of all obstructions.

The timber which we are handling with the machine runs about ten logs to the thousand and five logs to the tree. We pull in one or



Aerial Skidding—Log carried horizontally

two trees at a time, according to conditions, the trees being cut into log lengths at the landing.

The minimum 10 hour day's work for the machine is 30,000 feet with a crew of 18 to 20 men, according to conditions, at a maximum cost of \$2 per 1,000 feet, on average skidding distance of 2,000 feet. This includes all working expenses, from the falling of the trees to the decking or loading of the logs at the landing.

We are not operating at all this season and have therefore not really given the machine a thorough try-out; it is new to ourselves as well as the men. But we are satisfied from careful observations made, that with a crew of good live men, we can put in from 35,000 to 40,000 feet easily and thus cut the cost considerably.

The country in which we have been operating the machine is too steep for horse logging to be practical, so that we are not able to make any actual comparison.

Our average cost of logging with horses has been around \$5 per



Aerial Skidding—Log nearing the landing



Aerial Skidding—Showing character of the timber

B. C. FIR TIMBERS

Fir and Cedar Doors Finish Casing Base and Mouldings

RED CEDAR SHINGLES

Try Our "AAI Brand" Red Cedar Bevel Siding

E. H. HEAPS & CO., LTD.

Mills at VANCOUVER, B. C. and RUSKIN, B. C.

Jenckes Boilers

WE make a specialty of large Tubular Boilers for regular or Dutch oven setting for saw mill service. Our Boilers are built to conform with the various Provincial Inspection Acts and each is rigidly inspected and tested under high pressure before shipment.

Ask for quotation.

The Jenckes Machine Co.

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All kinds of
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cranes for
hand power
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TORONTO
Iron founders, crane makers, machinists

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Illustration of
**Electric
Derrick**

6 tons capacity.
Boom 65 feet.
Steel Boom and
Steel Mast.

1,000 feet at the landing, and we are so well satisfied that, for the country in which we are operating, the aerial system is the best method—being both cheaper and cleaner—that it is our intention to put in more of these machines and do away with horse logging entirely if possible.

The system is like any other innovation; it takes a little time to break in the men and get them used to the work, and our experience when we first started to operate was anything but satisfactory; but they soon get the hang of it.

One very important advantage of the aerial system is that you can operate almost as cheaply in six feet of snow as you can on the bare ground.

Nearly a Mile of Single-Span Cableway

A new overhead cableway skidder, which establishes a remarkable record for distance, has been installed in the Great Smoky Mountains at Elkmont, Tenn., by the Elkmont Contract and Supply Company.

The main cable stretches from the peak of the boom on a self-contained portable skidder, to the top of a hill three thousand five hundred and seventy feet distant, without any intervening support.

Over this lengthy span they are skidding hardwood logs running four to the thousand feet without trouble or delay, having a daily capacity of about thirty thousand feet.

The machine is of the type of the Clyde Overhead Cableway Skidder, but is mounted upon steel skids instead of upon trucks. It has also a powerful extra drum for moving the machine, which is effected by making fast the moving cable to suitable anchorage ahead of the skidder and throwing in the clutch connecting this drum with the engine. In this way the machine is dragged up to an elevation sufficient to make possible these immense spans. The main cable is 1½-in. and is giving perfect satisfaction.

At present the skidder is working from one end of a valley known as Coon Hollow, being located on an elevation at one end of the hollow while the cable extends down the hollow to the opposite mountainside nearly a mile away. Logs are being skidded from both banks of the hollow.

Six guys are used, all being of 1 in. cable, two of which are wound on steam-driven drums and run from the peak of the boom back to the rear of the machine. Another guy runs out directly in front of the machine, and the remaining three are used to balance the pull of the main cable. These last four guys are all tightened by means of the skidding cable. The machine has eight drums in all, every operation being self-contained and under power.

The main cable itself is wound up, under steam, on a special drum contained on the bed of the machine and is not separate as in all other types of cableway skidders. This enables the operator to wind off only as much cable as will be required, the balance being stored on the drum out of the way.

Coal is conveyed to the machine by means of the skidding line (which runs through the buggy on the main cable) being lowered down into the valley where the buckets of fuel are made fast to it, raised and skidded in direct to the machine.

Those interested can obtain further information from the manufacturers, the Clyde Iron Works of Duluth, Minn.

Atkins Pioneers Hold Annual Banquet

E. C. Atkins & Company, Inc., Indiana, Ind., recently held their annual banquet of the "Atkins' Pioneers." This organization is made up of employees who have been associated with the Atkins Company for over twenty years. Twenty-five years ago the entire pay roll of the Atkins plant numbered about 200, and of this staff, 117 are still connected with the company. It is also interesting to note that among the members of the "Atkins' Pioneers," there are six new members who have been with the company for twenty years; 46 members who have been with the company between twenty-one and twenty-five years; 37 members who have been with the company between twenty-six and thirty years; 21 members who have been with the company between thirty-one and thirty-five years; 3 who have been with the company between thirty-six and forty years; 3 who have been with the company between forty-one and forty-five years and one, Mr. John H. Wilde, Dean of the Pioneers, who has forty-nine years' of service to his credit.

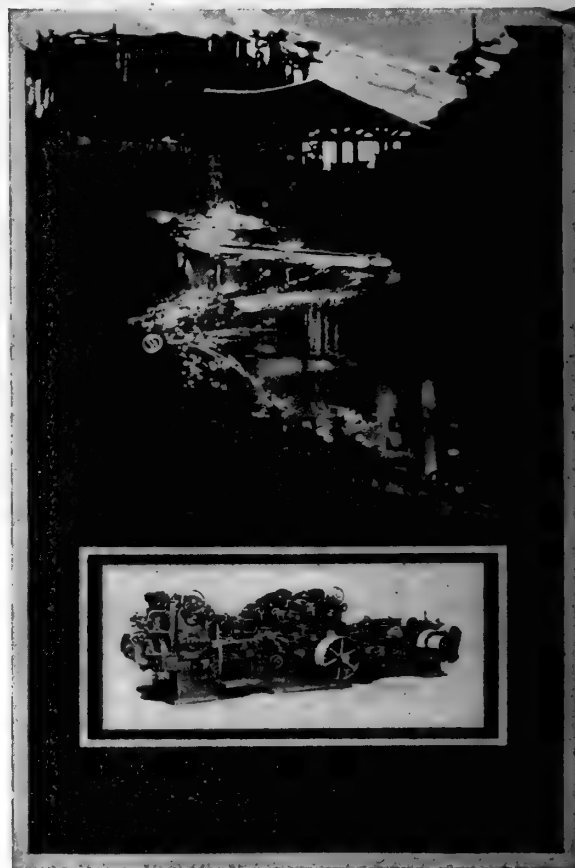
Disston Salesmen Hold Convention

Henry Disston & Sons, Inc., Philadelphia, Pa., held their semi-annual convention of eastern salesmen at their factory recently. The purpose of these meetings is to acquaint the men, who handle Disston goods, more intimately, with the methods of manufacture and also to get them better acquainted with one another. The attendance at the convention was large and the members are very enthusiastic over their work. New goods were shown and demonstrated and the superinten-

dents of the various departments gave the salesmen valuable information in regard to their manufacture. The salesmen also made frequent trips through the factory to see the actual production of their goods. Meetings held daily during the course of a week were addressed by various sepackers, including members of the sales force. The convention was a great success and enabled the salesmen to go out upon their duties once more, with even greater confidence than formerly, in the value of the goods which they handle.

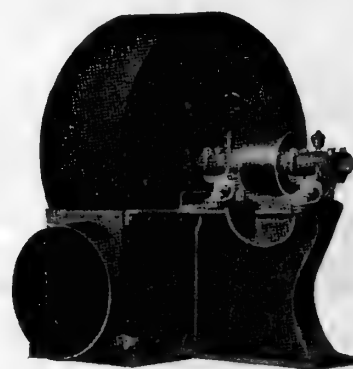
A Fine Planer and Matcher Booklet

The accompanying illustration is a reproduction of a very handsome cover design used by the American Wood Working Machinery Company, in connection with an attractive and extensively illustrated booklet recently published, describing their model 5 American seventy-seven planer and matcher. Apparently, the company have set themselves in their publishing department a standard equally as high



as that which they have reached in connection with the woodworking machinery. The booklet, by means of its descriptions and illustrations must convince any interested reader that it will be to his own decided advantage to investigate this planer and matcher before making a selection.

With the advent of the Kettle River Railway through the Hope mountains, there will be rendered accessible 32,000 acres of fir, cedar and hemlock in the Coquahalla watershed. Of this only 6,500 acres have been taken up by lease, the remainder still forming part of the timber held by the crown.



WHY you should install the Mahony Blower System in your Planing Mill

Fifty per cent. higher efficiency than any other on the market to-day, uses ½ less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

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A. Mahony, 512 Wellington West, Toronto



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First—LEATHER, possessing in the highest degree possible the following characteristics :

Good driving surface, to enable the belt to operate under minimum tension.

Firmness, that the belt may remain straight, run true on the pulleys.
Pliability, that it may hug the pulley closely, securing a large arc of contact.

Little Stretch, that it will seldom need to be shortened. **Elasticity**, that it may easily take up and let go its load as it travels round the pulley.

Good tensile strength, that it may carry its load without breaking.
Resistance to external conditions, such as heat, moisture, chemicals, etc., that it may do its work in any place, at any time, enduringly.

Second—CEMENT of the highest quality.

The cement must be powerful, elastic and immune to all the destructive forces that leather itself is able to withstand. As a matter of fact, the cement, when properly applied, becomes to all intents and purposes a part of the leather itself.

Third—WORKMANSHIP and INSPECTION.

Careful and skillfull workmanship should go into every process of construction. Rigid inspection of each operation is absolutely essential.

In short, high-grade leather belting can be obtained only from leather properly tanned, curried and finished; and that leather properly cemented with a suitable cement, all involving careful construction and rigid inspection of every process.

Subject for next month :—“ *Progress Made in the Manufacture of Belting* ”

Graton & Knight Manufacturing Co.

Unity Building, 46 Alexandra Street, Montreal, Can.

Home Office and Factory : Worcester, Mass., U.S.A.

Oak Leather Tanners and Belt Makers

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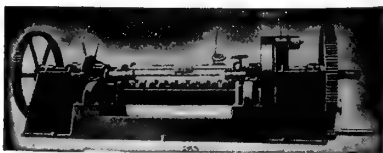
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EDGINGS

Ontario

The sawmill at Lakefield, Ont., owned by John McGrath, 697 Harvey street, Peterboro, Ont., was recently destroyed by fire.

It is reported that an agreement has been reached with the Ontario Government which will enable the Backus Interests to proceed with the erection of a pulp mill at Kenora, Ont.

The sash and door factory and sawmill owned by J. R. McLaurin, Jr., at Vankleek Hill, Ont., was recently destroyed by fire. The loss amounted to \$8,000 and the insurance to \$3,000.

Mr. J. J. McFadden, Renfrew, Ont., has purchased the White Pine Lumber Company's limits in the township of Gough, Ont., and their logging outfit at Webbwood, Ont. He has put in two camps upon the limits this winter and the logs will be taken to his mill at Spragge.

J. R. Eaton & Sons, Orillia, Ont., are considering plans for the erection of a new planing mill. They have asked the town council to grant them a site and make them a loan. If satisfactory arrangements can be made a by-law will be submitted to the ratepayers at an early date. The proposed building will be 296 ft. x 150 ft., in addition to which there will be engine rooms, dry kiln and offices.

Chas. Pedwell, Lions Head, Ont., whose mill was destroyed by fire last fall, has purchased the circular mill formerly belonging to E. M. Miers, Wiarton, Ont., and will cut stock there during the coming summer. The mill has a capacity of 20,000 feet of one inch maple per day. It has steam feed and Mr. Pedwell intends to install a steam nigger and loader. Mr. E. M. Miers will continue in charge of the mill.

The Sudbury, Kewawa & Bell River Railway Company, whose chief incorporator is Mr. John Lumsden, of Ottawa, is seeking to obtain incorporation at Ottawa. It will serve the timber trade in the district through which it will run and provide a facility much appreciated for the opening of new limits. The line is projected from near Sudbury, Ont., easterly to Kewawa Junction, Que., and thence northeasterly to Bell River, Que. Its head office will be in Ottawa.

A large pulp paper and lumbering business, to be conducted, is to be established at Yellow Falls, in the vicinity of the Transcontinental Railway, in a short time, according to a report from Cochrane, Ont. The capital behind the scheme is said to be largely English. The proposal is to erect a mill at Yellow Falls, fourteen miles south of the bridge which crosses the Mattagami River at Jacksonboro', and it is also proposed to do all the manufacturing of pulp, paper and lumber on the site, the freight charges being too high to send the raw material away.

The Wood-Mosaic Company, Inc., New Albany, Ind., report that they have given up, for the time being, their proposal for the erection of a plant at Stratford, Ont. The losses which they recently sustained by fire at Louisville and Albany were much more serious than at first supposed and have involved the spending of much more money in re-building operations than was expected. For this reason they will not be able to go ahead with the Canadian undertaking this year and report that it will probably be twelve months before they can consider the matter again.

The Welland Lumber Company, Limited, which was recently incorporated, with head office at Welland, Ont., and capital stock of \$100,000, has the following officers:—President and general manager, John W. Rounding; vice-president, Frank Edwards; secretary, E. Teusley; treasurer, George Tufts; director, George W. Hodgson. The company's charter authorizes them to carry on business as timber merchants, sawmill proprietors, etc., and to buy and sell and deal generally in timber and wood of all kinds, also in timber limits. The company have secured a site near the G. T. R. at Welland and will erect a modern sash and door factory thereon.

The Sutherland, Innes Company, Limited, Chatham, Ont., report that they are over-hauling the plant at Chatham which they recently purchased from W. M. Drader and are putting in some new machinery in the heading department and in the hoop department. They are also over-hauling the sawmill boilers and engine and making the plant a first-class one in every respect. They will manufacture a full line of staves, hoops, heading and heading liners. They have taken over Mr. Drader's contract to manufacture barrels for the T. H. Taylor Company, manufacturers of Beaver Flour. The company will thus be manufacturing flour barrels for both of the large flour mills in Chatham. They also advise us that there is no foundation for the report that they will build a plant at Corinth, Ont.

The John Carew Lumber Company, Limited, Lindsay, Ont., have made a number of important alterations to their plant, with the object of increasing their capacity. A new Diamond 5-foot horizontal resaw has been installed, together with new slashers and new lath machinery. The floor of the mill has been rearranged and it is expected that the capacity will be increased by adding extra boilers and another 110 h.p. Wheelock engine. A number of new live rolls and conveyors have also been installed. A new railway siding has been put in to improve the yard and increase the shipping facilities. The company's tugs "Arthur C" and "Charlie L" have also been overhauled. A new boiler of 225 pounds per square inch pressure is being installed in the "Arthur C." The company report that they expect the coming season to be one of the busiest that they have ever experienced.

The Abitibi Pulp and Paper Company have reorganized their finances with the object of completing the plant at Iroquois Falls. With the proceeds of \$3,500,000, securities sold to a Chicago house, the ground wood mill will be brought up to a capacity of 225 tons per day, and a sulphite mill of 60 tons capacity as well as a four machine news print mill will be constructed. A new company, with the name of the Abitibi Power and Paper Company, Limited, will be formed to take over the assets and liabilities, the capital being \$7,000,000, with first mortgage gold bonds and debenture stock of \$6,000,000. The plans for the paper and sulphite mills have been prepared by Mr. George F. Hardy, of New York, and contracts for construction and machinery

will be called for early in March. It is expected that the newspaper plant will be finished and in operation by the first of April, 1915.

Eastern Canada

W. & R. Walsh, Wellington street, Chatham, N.B., have nearly completed plans for the erection of a sash and door factory.

The estate of the late J. H. Redfern, Montreal, has been placed in the hands of a trust company and is being gradually liquidated in accordance with the terms of the will.

A small mill has just been completed at St. Amade, near Montebello, P.Q., by the Owens Lumber Company, Limited. The capacity is about 12,000 feet per day. The mill is turning out hardwoods, particularly birch.

E. Neale, of Chatham, N.B., who formerly represented the English firm, Frank Harrison & Company, has returned from England after making arrangements to represent several large British timber houses, and he will continue his shipments from the Miramichi.

The paper mill owned by the New Brunswick Paper Company, of Miller-ton, N.B., on the Miramichi, is reported to have reduced its staff and output. The explanation given is that the output of the kind of paper they produce was larger than the market could absorb.

The stock of pulpwood formerly belonging to the East Canada Power and Pulp Company, Limited, in liquidation, has been sold to the Donohue Company, Quebec, P.Q. The pulpwood is in the yard of the mill at Murray Bay and also uncut at the company's limits on the Murray river and its tributaries.

A despatch from Bryson, P.Q., states that Mr. Justice Weir has given judgment for R. Rainboth, civil engineer, against M. J. O'Brien, contractor, for \$500,000. The action related to timber limits, in which the court held that the plaintiff had large interests, but deducted his share of the \$42,000 for expenses in works and materials furnished by O'Brien.

The Papineauville Lumber Company, Limited, Papineauville, P.Q., are erecting a mill for the manufacture of cheese box veneers and cheese box headings. They are just completing the installation of the machinery, all of which is of Canadian production and they expect to start operations early in March. The hardwood logs necessary for the operation of the mill are now being taken out in the woods. The company expect to make a large quantity of veneers during the coming season. They will also be equipped to make cheese boxes for direct shipment to cheese factories. When completed the mill will be thoroughly up-to-date.

Mr. W. B. Blair, formerly connected with the lumber firm of the late Mr. J. H. Redfern, Montreal, has formed a partnership with Mr. Louis Rolland as wholesale lumber merchants, under the name of Blair & Rolland, with offices at Room 234 Coristine Building, Montreal. Mr. Rolland formerly carried on business as Louis Rolland & Company. The new firm will stock lines recently handled by Louis Rolland & Company. The pulpwood limits, controlled by Messrs. Blair & Rolland, situated on the Gaspé Coast, have been sold to an English firm, who intend to start operations immediately, having taken possession of all interests with the idea of exporting the pulpwood to the United States.

The new stave, heading and shingle mill recently erected by the Sydney Lumber Company, Limited, at Dalhousie, N.B., to replace the one they lost by fire last year, is very complete and up-to-date. The main building is 110 x 36 ft., the sides and roof being covered with asbestos and galvanized iron. The mill contains four stave bilge saws, two double stave jointers, two stave crozing machines, four shingle machines complete, two heading machines complete, one small rotary and one machine for making barb wire spools. The engine room is 20 x 30 ft. and contains one large Robb-Armstrong engine. Two large boilers are operated with brick furnaces having return draft. The plant also includes a large dry kiln. The Jacquet River Lumber Company are manufacturing boards, planks and deals for the Sydney Lumber Company at their long lumber mill on limits owned by the Sydney Lumber Company on the line of the I. N. Railway.

The timber flume which has been under construction recently on Robson Creek, B.C., for bringing timber down to the Little Slokan River, whence it will be run down to Mr. W. C. E. Koch's mill, has recently been completed at an expense of \$29,000. Six million feet of logs will be brought down the flume during the coming spring and summer. The construction of the flume was a matter of much difficulty as it involved blasting, piling in swamps, etc. The flume, which is V-shaped and about a mile and a quarter in length, has sides which, with the exception of the first 500 feet, are four feet in depth. The grade varies from one to seventeen per cent. The flume is constructed of the best class of cedar to be obtained. The timber on Mr. Koch's limits on the Little Slokan will take five years to clear and the land, when cleared, will be excellent for ranching purposes. Mr. Koch intends finally to put the land up for sale.

Western Canada

Tenders are being received by Percy S. Howard, assignee, 607 Dominion Trust Building, Vancouver, B.C., for the purchase of the mill buildings, machinery, logging plant and equipment of the Sunset Lumber Company, Limited, of Bradner, B.C.

The Vancouver Lumber Company, Limited, are considering plans for making alterations to their cedar mill at Roche Point, B.C. The intention is to install a large amount of new machinery. The president of the company is Mr. J. E. Tucker and the managing director is Mr. E. C. Knight.

The B. C. Sulphite & Fiber Company, which has a pulp mill on Howe Sound, B.C., has bought 1,070 acres of timber on Sutej Channel from the Government, and is to have the area cleared in three years. The holdings comprise 6,000,000 feet of hemlock, 2,000,000 feet of larch and 3,000,000 feet of cedar, the hemlock and larch bringing 10 cents a thousand, in addition to the royalty, and the cedar 25 cents a thousand. For 950 acres on Broughton Island, bought by the same company, 15 cents was paid for the hemlock and larch and 40 cents for the cedar, in addition to the royalty. The timber contents of this latter area are 9,000,000 feet of hemlock, 4,000,000 feet of larch and 1,500,000 feet of cedar.

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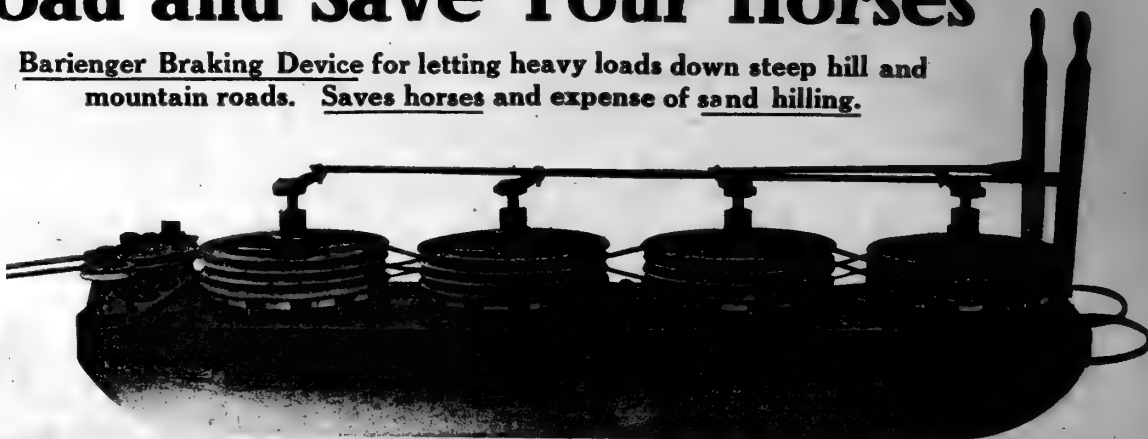
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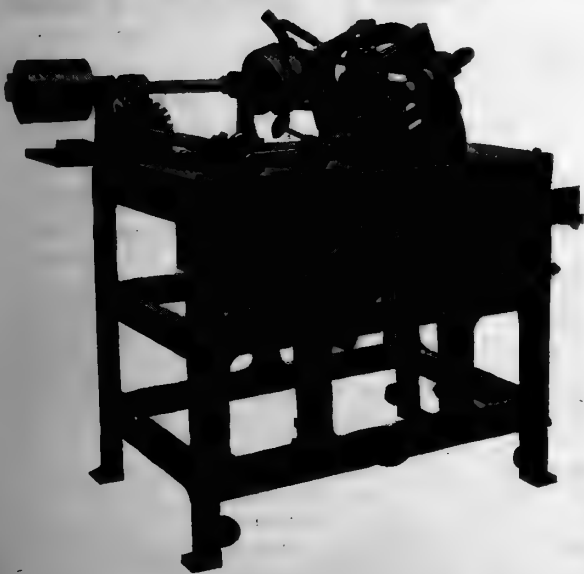
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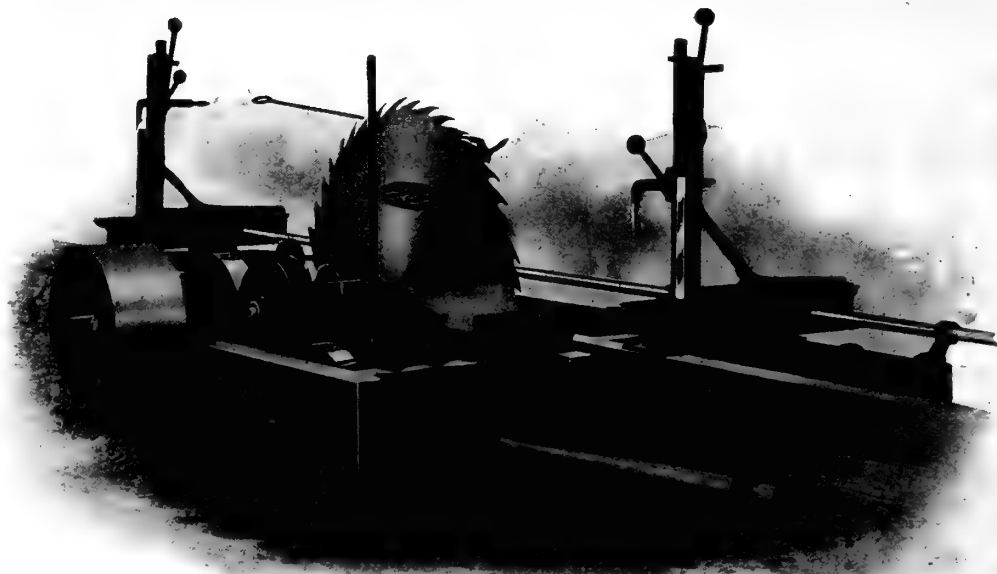
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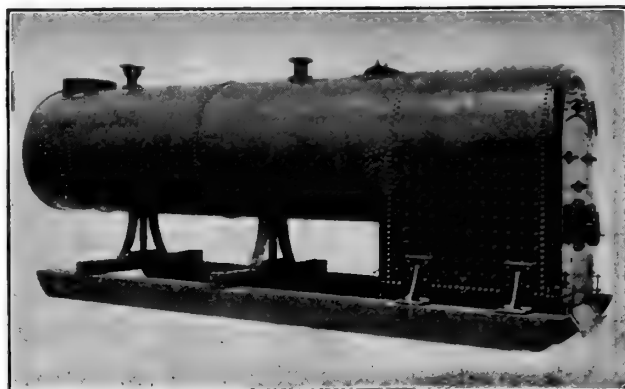
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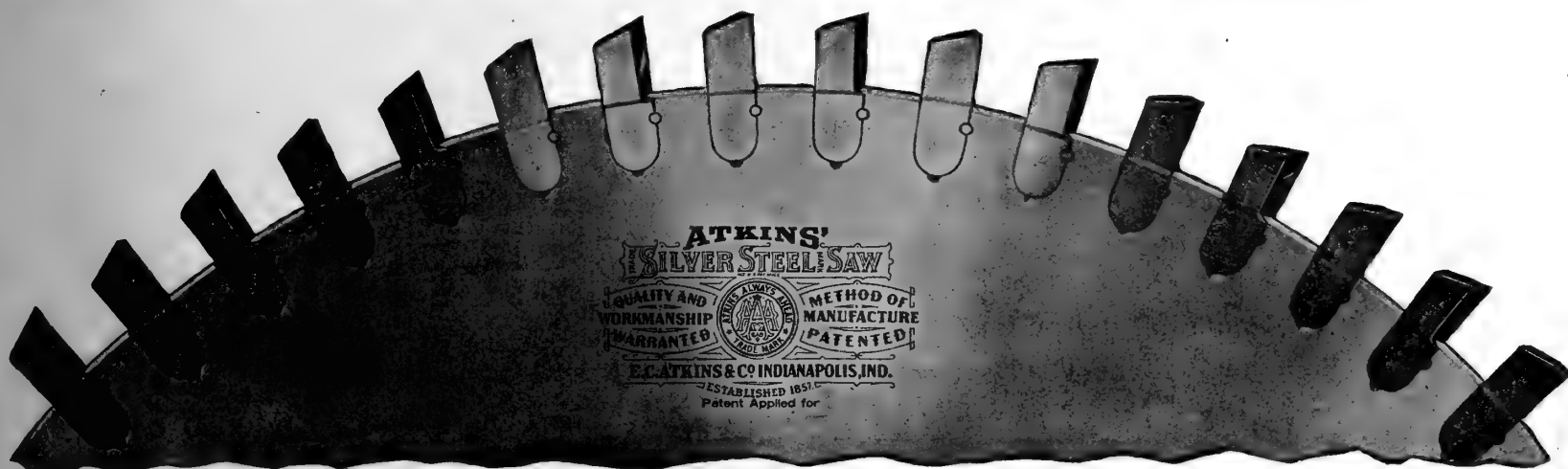
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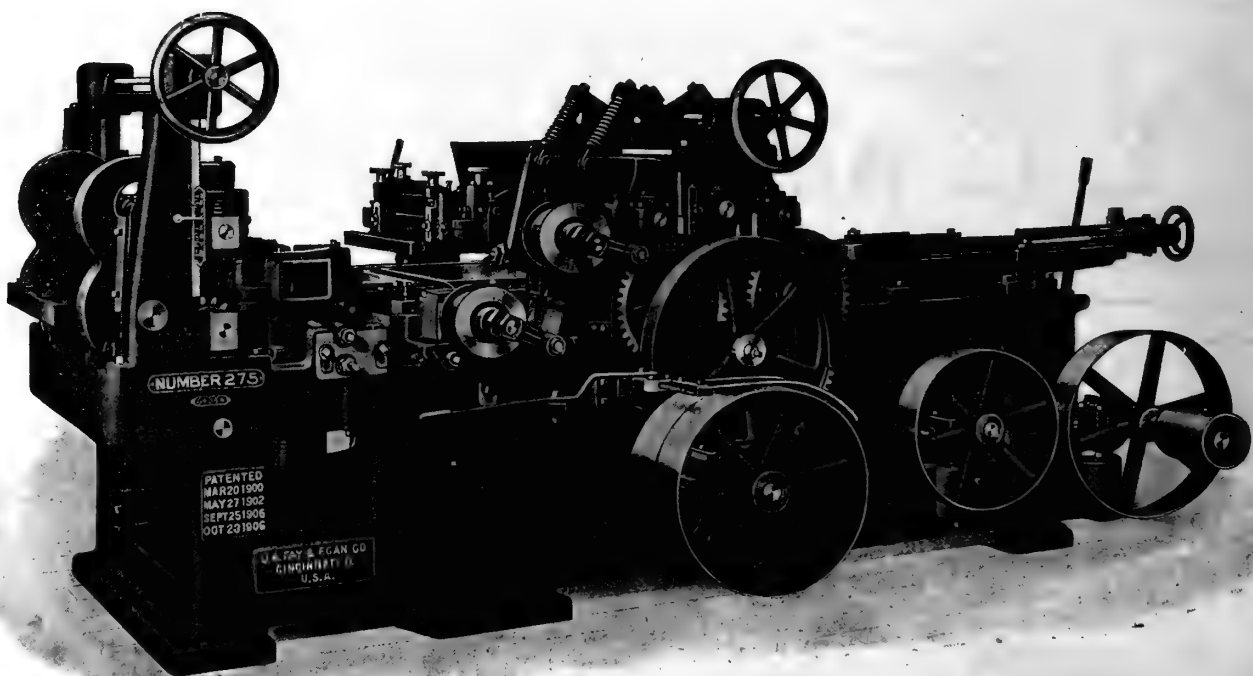
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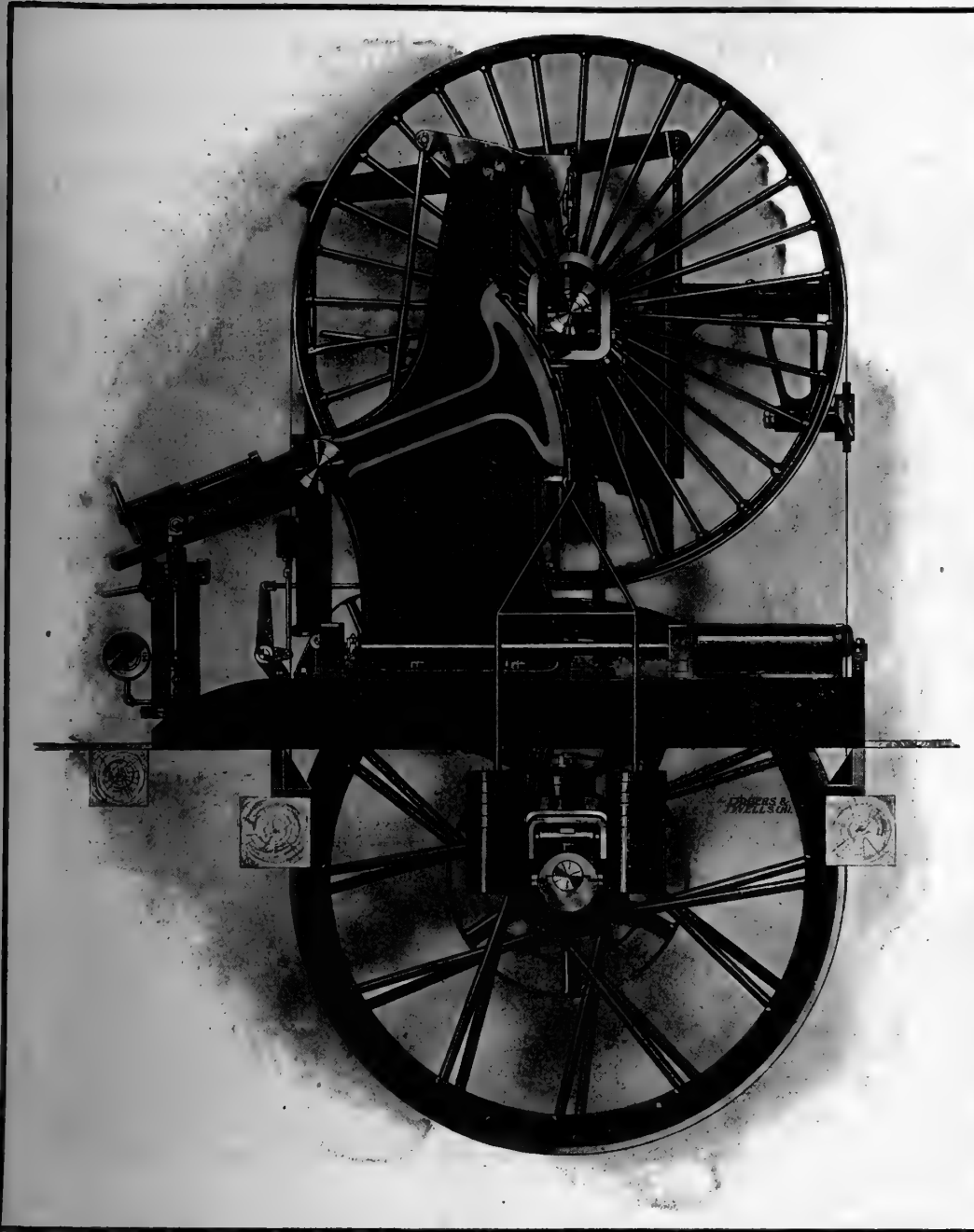
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4. I will serve you as an inside moulder carrying formed cutters up to 1 1/4" projection.
5. I am readily accessible in every part, so that changes can be made quickly, easily and economically.
6. I have all the conveniences, all the time-saving adjustments and all the grade-raising value of the latest fast-feed matchers.
7. I have a mechanically perfect drive that makes every ounce of power count.
8. I run at a low operating cost, both for power consumed and upkeep expense.
9. I am medium in weight and size.
10. I am also medium in price, so that any mill can afford to put me in.
11. I am making money—big money—for hundreds of successful planing mill owners, men who, like you, are operating a general purpose mill.
12. I will do the same thing for you.
13. I invite you to write today—now—to my designers and builders.

J. A. FAY & EGAN CO.

465-485 W. Front St., Cincinnati, Ohio, U. S. A.





The Steam Tension Band Mill

THE top guide on this mill, as well as the upper wheel, is operated by a steam cylinder.

This means that the guide can be moved up or down instantaneously, which in one day's work means quite a saving of time over the ordinary mill. This goes a long way towards paying for the mill by the end of a year.

But this is not all—with this steam operated guide it is just as easy to keep the guide close to the cut as it is to set it for certain size logs and keep it

there. This can be done without loss of time, and so by bringing the guide down close to the cut, vibration of the saw is done away with and the quality of the lumber is improved.

No form of tension yet devised is as easy on the saws as the steam tension—several of the users of this mill have run through an entire season without cracking a single saw.

These are some of the reasons why our steam tension band mill is the most economical mill to buy, and there are others which you will find in our catalogue.

When you are tuning up your mill this winter for next season's operations, remember that we can serve you promptly whatever your requirements may be.

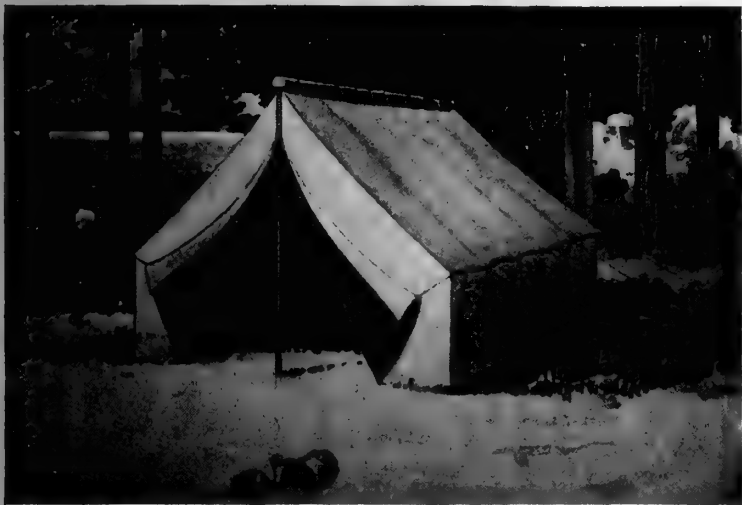
William Hamilton Company, Limited

PETERBOROUGH, ONTARIO

Adam lived in the bush;
but he wasn't comfortable!

He Couldn't Get
A Good Tent.

Times have changed



Silk Tents, Contractors'
Tents, Stable Tents,
Tarpaulins, Etc.

Smart-Woods
CANADA LIMITED

Ottawa

The human bees: Always busy

Montreal

Toronto

Winnipeg



Scandinavia Belts

Will save you money on all your direct Drives, whether straight or crossed.

This is the original solid woven Belt. Write for our book on complete Belting information.

Other Lines:—

Lanco Balata
Teon
High Speed Leather
Belts

Federal Engineering Co., Ltd.

Toronto - Montreal

BEATH DERRICKS

Steam—Electric—Hand

Latticed Steel or
Timber Construction

If you handle Lumber Timbers or Logs you can do it cheaper with a **BEATH DERRICK** than by any other means.

Write for Catalogue "D"

W. D. Beath & Son, Limited

Engineers and Manufacturers

Toronto, Canada

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24

RED BIRCH			
	4/4	5/4 to 8/4	
	44 - 46	30 - 32	18 - 20
	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22

SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22

BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23

PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00	55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00	40 00	

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	
No. 1, 1 x 8	37 00	
No. 2, 1 x 12	40 00	42 00
No. 2, 1 x 10	35 00	36 00
No. 2, 1 x 8	34 00	35 00
No. 3, 1 x 12	32 00	33 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	29 00	30 00

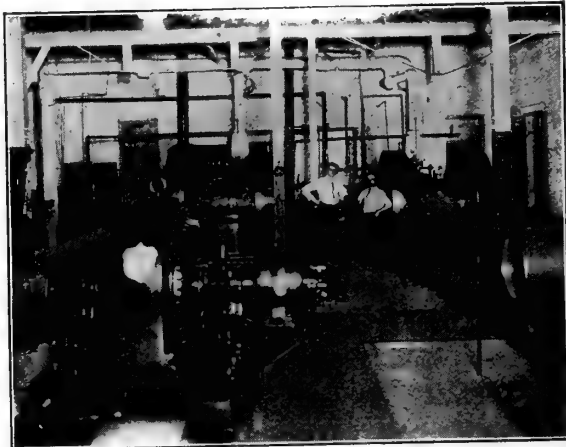
Canadian spruce boards	25 00
Spruce, 10 in. dimension	28 00
Spruce, 12 in. dimension	29 00
Spruce, 9 in. and under dimen.	26 00
Spruce, 8 in. and under dimen.	25 00
10 and 12 in. random lengths, 10 ft. and up	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00

1 1/4-in. spruce laths	4 40
1 1/2-in. spruce laths	3 80

New Brunswick Cedar Shingles	
Extras	3 65
Clears	3 36
Second clears	3 00
Clear whites	2 65
Extra 1s (Clear whites out)	1 50
Extra 1s (Clear whites in)	1 00
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 65
Red Cedar Eurekas, 18-inch 5 butts to 2-in.	4 25
Red Cedar Perfection, 5 butts to 2 3/4	4 80
Washington 16-in. 5 butts to 2-in. extra red clear	3 50

The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/4 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4c per ft. All F.O.B. Jamestown, New York.

Why Cling-Surface Treated Belts Pull Best



Taken verbatim from Robert Thurston Kent's article, "The Pulling Power of Slack Belts," from *Industrial Engineering*, May 1913 issue. This article was based upon experimental research with untreated and Cling-Surface-treated belts. Ask for complete copy of his report.

"The value of the treated belt apparently lies in the fact that the tension on the slack side of the belt so treated, may, owing to the greater coefficient of friction, be decreased to a much lower value than for the belt not so treated, before slip occurs. This decrease in the value is accompanied by an increase in the length of the belt, thereby giving it a greater arc of contact on the pulley. These two factors both tend to increase the pulling power of the treated belt over that of the untreated belt in an increasing ratio."

Cling-Surface and the direct and indirect economy improvements are now receiving more serious attention than ever from prominent scientists.

The photograph of Cling-Surface-treated-belts shown is but one of hundreds with accompanying data which we have to prove the lasting benefits.

Cling-Surface stops slipping, water-proofs, reduces friction, and permits belts and ropes to run easy or slack.

Tell us about your belts and ask for literature.

We quote f.o.b. Toronto.



Cling Surface Co

1021 Niagara St Buffalo N Y

New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 76

WHY?

Pay for Bags, Sacking, Freight, Handling, Cadging on light dirty oats, when the above items of cost are the same on

Heavy, Clean, "National" Oats

purchased direct from producers and shipped from our elevators in the heart of the best oat sections of the Western Provinces.

Write or wire for quotations

National Elevator Company, Limited

WINNIPEG, MANITOBA

Port Arthur, Ont.

Calgary, Alta.

"AJAX" The World's Strongest Chain



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.

Do your log loading with the "Ajax" loading chain, every link of which is guaranteed. The illustration tells a convincing story.

Standard Chain Company
Pittsburgh, Pa.

The World's Largest Chain Producers.

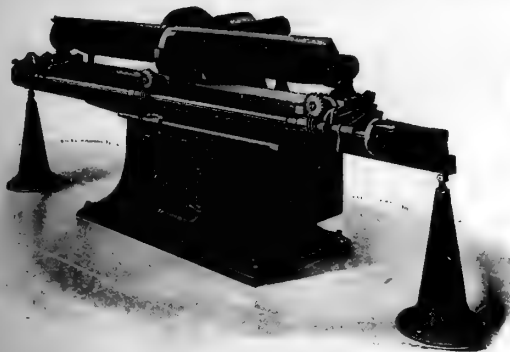
Montreal: Alexander Gibb, St. Nicholas Bldg.

Winnipeg: Bissett & Loucks.

Vancouver: John Burns, 329 Railway St.

Showing the same pulled to destruction, breaking at 7,800 lbs.
(See how this Chain stretched before breaking.)

AUTOMATIC FEED KNIFE GRINDER



Type "B," range from 5' to 130'. Price—From \$220 to \$395.

This cut represents one type only of our line of automatic knife grinders. We make all sizes from a small \$65 bench grinder to a 130 in. machine.

We also manufacture a complete line of automatic

Saw Sharpeners

for both circular and band saws.

No millis complete without one or more of the Rogers-Buffalo Machines.

Send for our catalogue—it is free on request.

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.



Dixon's Traction Belt Dressing

EVERY element needed to restore and maintain the "life" of a leather belt is contained in this paste dressing. It penetrates to every fibre of the belt, strengthening them and bringing back the pliability and vitality—and it puts on a surface of maximum pulling power. It water-proofs the belt, too, so much as any dressing can. Send for "The Proper Care of Belts," No. 238.

Made in JERSEY CITY, N.J. by the

Joseph Dixon Crucible Company

Established 1827

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

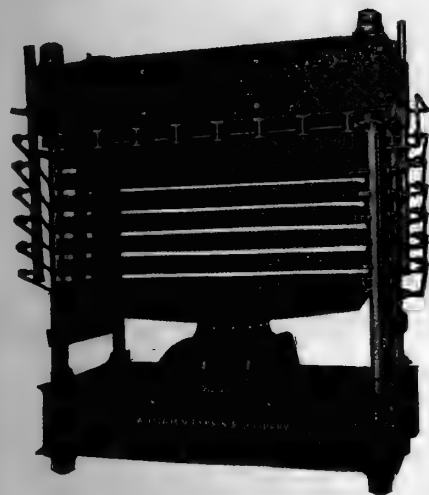
Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

The Laidlaw Bale-Tie Co., Limited

Winnipeg
Harry F. Moulden & Son

HAMILTON,
ONTARIO

Vancouver
George W. Laidlaw



Veneer Press and Dryer

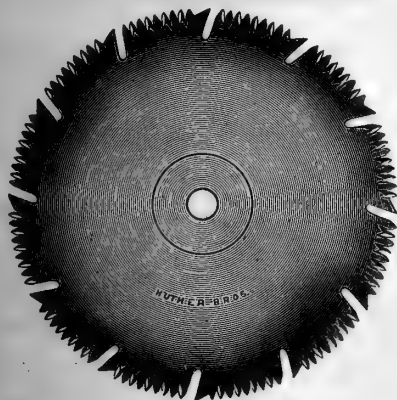
Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

WRITE FOR PRICES AND QUOTATIONS

William R. Perrin and Company, Ltd.
TORONTO, CANADA

HUTHER BROS.
Hollow Ground Combination Tooth Mitre Saw

Patent Groover or Dado Head

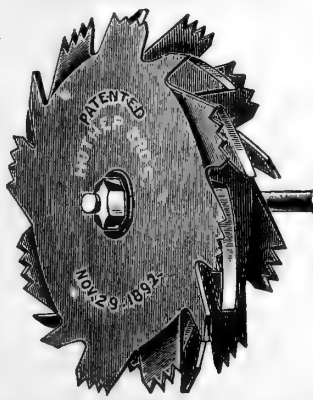


For either Rip or Cross Cutting

Will cut equally as smooth in either Ripping, Cross-cutting or cutting at an angle of 45 degrees, with grain of wood.

Allow us to quote Prices on Saws for any special work that you wish to do.

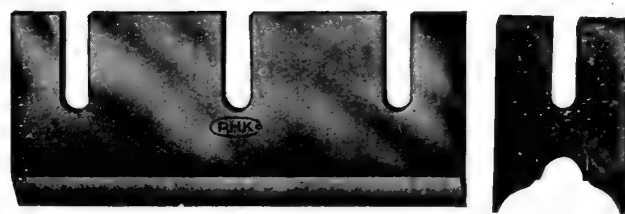
HUTHER BROS. SAW MFG. CO. Inc., 1103 University Ave., ROCHESTER, N. Y.



Can be used on any Circular Saw Mandrel

For cutting any width groove from 1/8" to 2" wide. Will cut either with or across the grain. (Sent on approval).

The Peter Hay Knife Co., Limited GALT, ONTARIO



MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

Boss Line Lumbering Tools

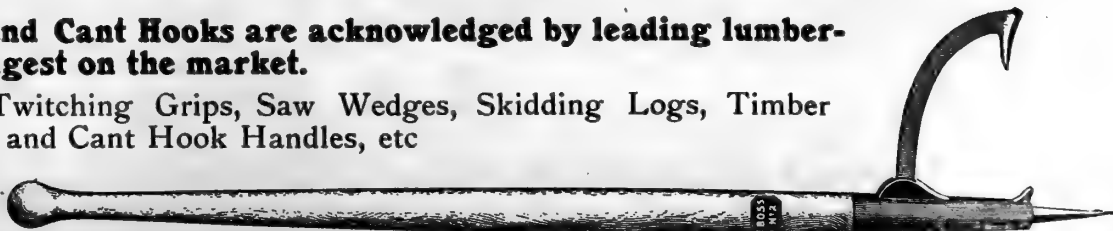
Manufactured by

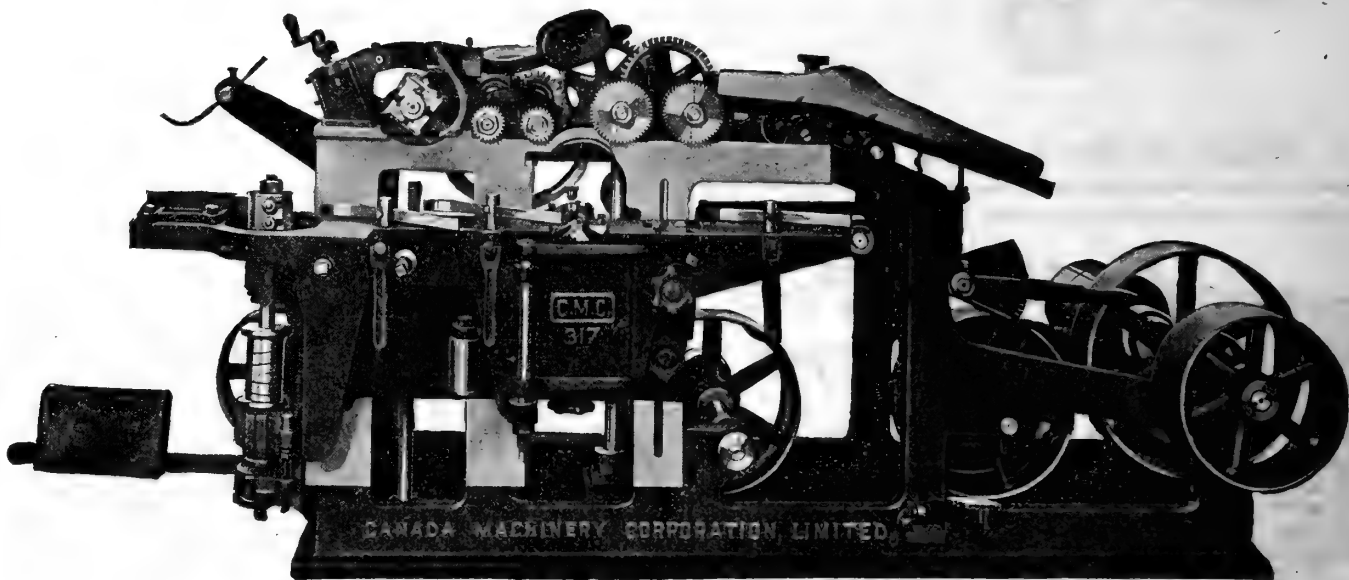
The McFarlane-Neill Mfg. Co., Ltd., St. Mary's, N. B.

Forged Steel Socket Peaveys and Cant Hooks are acknowledged by leading lumbermen to be the lightest and strongest on the market.

Try our Steel Loading Blocks, Twitching Grips, Saw Wedges, Skidding Logs, Timber Carriers, Split Rock Maple Peavey and Cant Hook Handles, etc

Catalogues furnished and prices quoted on application



SASH**STICKER**

No. 317 Sash Sticker With Boring and Grooving Attachment

A very convenient sticker for sash factories.

For making stiles, bars and mullions in one operation.

Supplied with or without boring and grooving attachment.

This machine is strongly built throughout and the feed is by four corrugated rolls.

The parts are all readily accessible; all adjustments being made from the working side of the machine.

Bulletin No. 317 particularly describing this machine sent on request.

Our moulder catalogue describing the complete line of moulders we build, to be had for the asking.

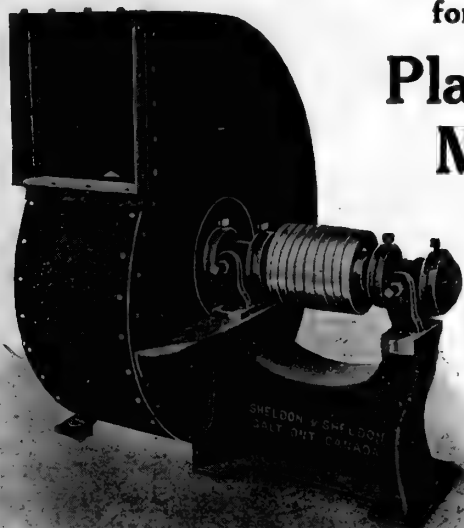
Canada Machinery Corporation, Limited

Galt, Ontario

Largest Builders of Wood-Working Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The **Sheldon Shaving Exhaust Fan** is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

Messrs. Ross & Greig, 412 St. James St. Montreal, Que. Messrs. Walker's Limited, 259 Stanley St. Winnipeg, Man.
Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock

Shiplap
Box Lumber

Boards

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

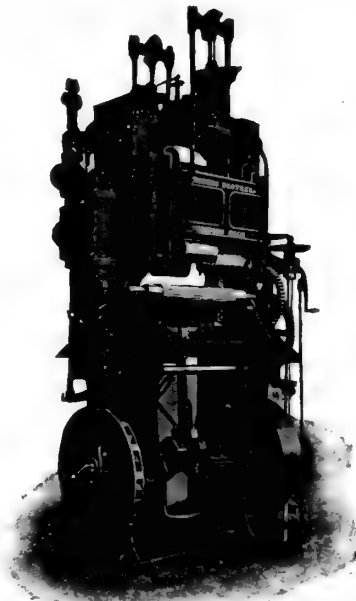
JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbing (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and **CARRIAGE** entirely, raise your cutting capacity, and install economy by the same stroke.

Not an **EXPERIMENT**, but an **ECONOMIO NECESSITY**.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."



Wickes Brothers

410 White Building - SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

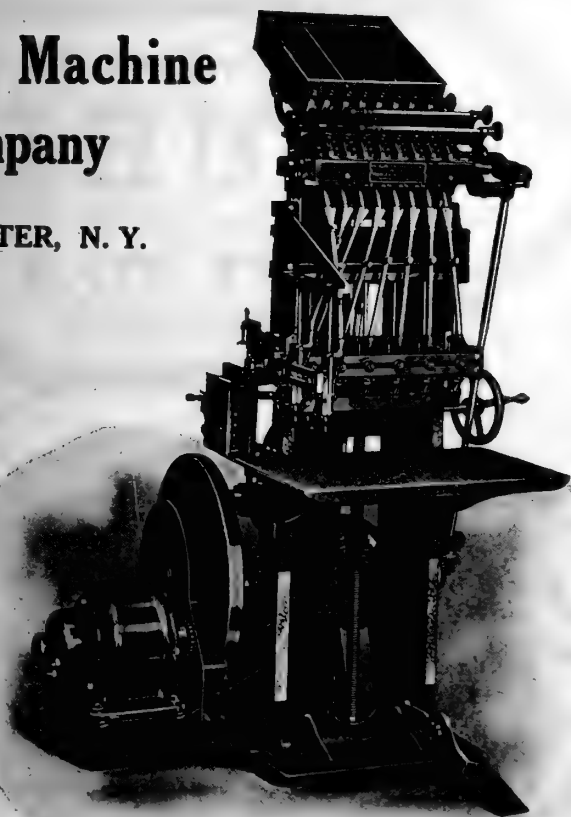
Manufacturers
of—

Nailing
Machines,

Lock Cor-
ner Box
Machinery,

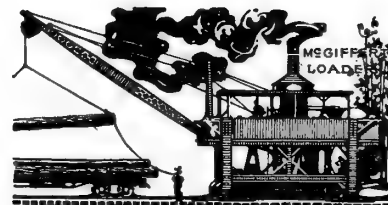
Box Board
Matchers,

Box Board
Printing
Machines.

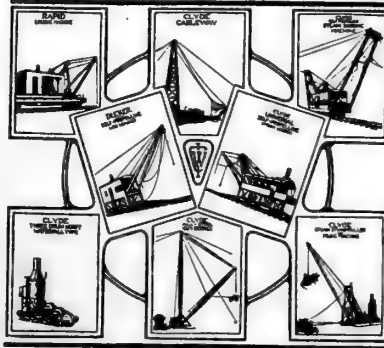


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.

Are your horses of use to you?

This seems an absurd question—and the answer is always
"Of course they are"—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	\$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic	
1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz.

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.
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Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.

Are Your Horses in Good Condition?

Horses for all lumber work are subjected to the hardest hauling under the most severe conditions. They should therefore be as fit as all possible care and attention can make them.



**In the Lumber Camp,
Around the Mill, In the Yard**

and wherever lumber has to be hauled the horses are always liable to a multitude of small injuries which if not attended to promptly may develop into lameness or disfigurement, thus reducing the working capacity of the horse and impairing its value from a sale standpoint.

You should always have handy and ready for use

Good Liniment

to reduce bruises, strains, soreness; allay pain and inflammation quickly, be an antiseptic dressing to a cut or burn, or to heal a wire cut, wound or laceration.

ABSORBINE

is an antiseptic healing preparation as well as a resolvent and a discutient. It will assist nature in bringing about a dissolution of the bunch, restore the circulation, gradually restoring the part to its normal condition.

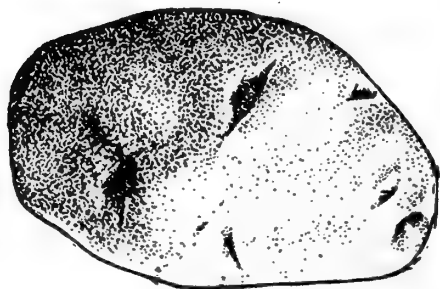
It will produce permanent and complete results without blistering or removing the hair, and will leave no blemish. You can work the horse at the same time.

All enquiries on special cases answered without delay—full information and instruction on request. Absorbine \$2.00 per bottle at dealers or express prepaid. Manufactured only by

W. F. Young P. D. F.

424 Lymans Bldg. -- MONTREAL, CANADA

Annihilate Scale



Potato Scale will positively remove scale from your boiler tubes and can do no injury to your pipes or fittings. Feed water should be regularly treated with Potato Scale to prevent scale, pitting, grooving and honeycombing; it saves fuel and so treats the water that it absorbs more steam.

Send us a gallon of feed water which we will analyze and then mix a sample of potato scale to suit your conditions—this is a free trial, write us.

C. C. Snowdon

Box 1384

Calgary, Alta.

WE CAN
DOUBLE
THE CAPACITY OF YOUR
DRY KILN
GRAND RAPIDS VENEER WORKS

Dry Kiln Service

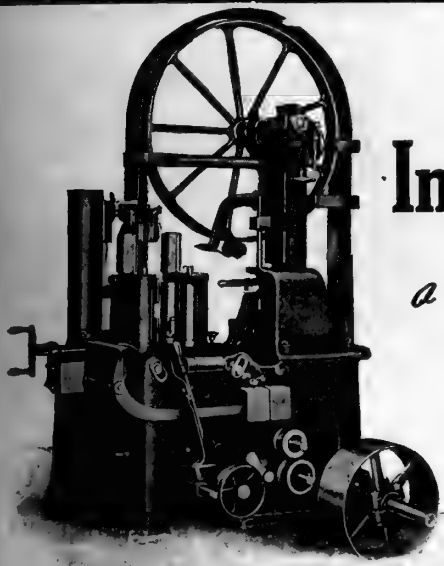
MEANS
TO
YOU

A Practical Theory
Competent Engineering
Effective Organization
Years of Experience
Guaranteed Results

Grand Rapids Veneer Works

Grand Rapids,
Michigan





Ideal Band Resaw

Independent

A Specialty Not a Side Line
BAND RESAWS

Coldwater, Mich., April 15th, 1912

Wm. B. Mershon & Co.,
Saginaw, Michigan.

Gentlemen:—

We take great pleasure in advising you that our man was able to begin operating your "Ideal" Resaw at once, and we find it so heavily and well constructed that we do not believe we shall be troubled at all with repairs.

Very sincerely yours,

BALL & SON

Wm. B. Mershon & Company
SAGINAW, MICH.

LOCATED

Just the tract of timber YOU, a manufacturer of lumber, need.

Just the tract of timber that will prove a desirable and profitable investment for capital now idle.

Buy it NOW.

Provide today for your future timber needs, for your future profits.

Buy a natural resource the supply of which is decreasing almost to the extent of the quantity used annually; the demand for which is increasing at home and abroad.

No other continent has such a wonderful and valuable array of timber as North America. Our woods are the most durable, the most beautiful, the easiest to work. Therefore they are the most valuable and our forest products are in demand wherever wood is used.

Today you are afforded opportunity to profit by the logic of this situation.

Send for copy of "Lumber User's Guide No. 8," which treats of the Special Values, Special Adaptabilities and Special Economies of Douglas Fir for all building purposes.

James D. Lacey & Company

Timber Land Factors

Chicago, Ill., 1750 McCormick Building
Portland, Ore., 1313 Northwestern Bank Bldg.
Seattle, Wash., 1009 White Building

Lumber Camp Ranges and Heaters

All Kinds of Stoves for Large or Small Camps

Our stoves are specially designed to meet all requirements of camp work.

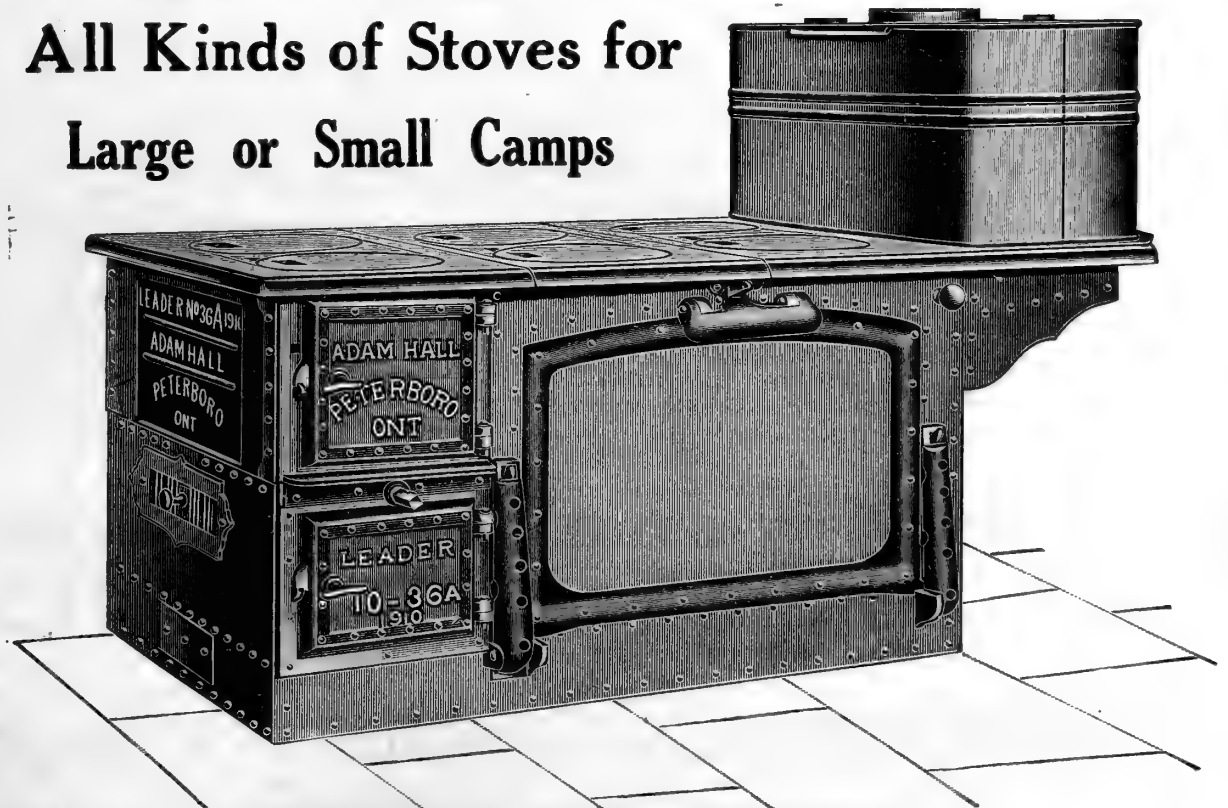
We know exactly what is necessary and desirable in this class of stove.

We put into all our stoves the best of material and workmanship coupled with the best of expert experience.

The 'Leader Range' for coal and wood, shown in this cut is specially adapted to Lumberman Camps, Boarding Houses, Hotels and Railroad Construction Camp Work. We also make this Range with side hinge doors.

It is large, heavy and strongly built. Has good oven space and large heating surface. When a good, solid, reliable stove is wanted the 'Leader' will give satisfaction.

Write for our catalogue.

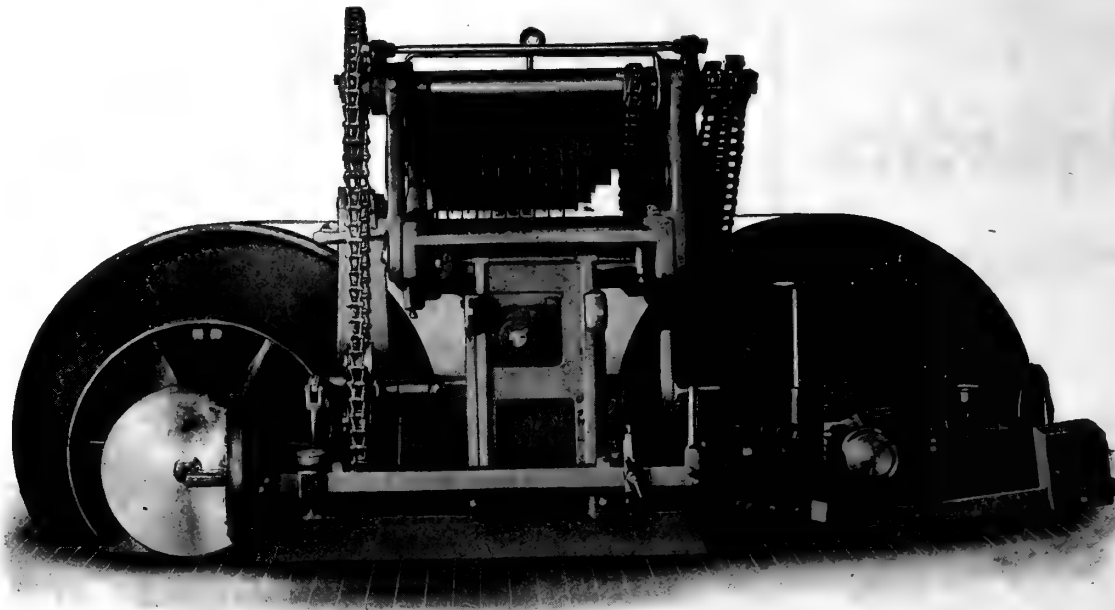


NO. 10-36A SIX HOLE LEADER RANGE AND RESERVOIR

ADAM HALL, Limited

Peterborough, Ontario

Manufacturers of Ranges, Heaters, etc., for Lumber Camps, Hotels, and Railway Construction



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

LOGGING LOCOMOTIVES



The locomotive illustrated was built for MacKenzie, Mann & Co., Contractors, Montreal, Canada, and represents the latest development in this type of locomotive.

It is suitable for logging contractors, quarries, mines and industrial service. It will haul 1,875 tons on level, and 160 tons on 3 per cent. grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

MONTREAL LOCOMOTIVE WORKS, LTD.

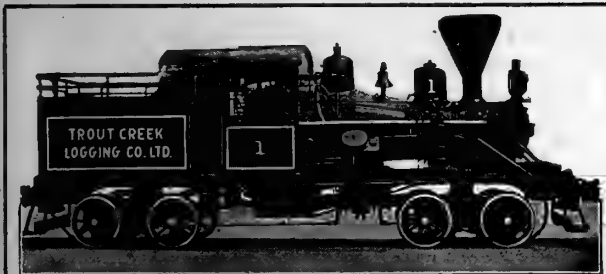
Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**A Reliable Engine in the Woods**

In logging operations the scene of activity is often many miles from repair facilities so the wise lumberman will appreciate the importance of a reliable locomotive. Our locomotives are built with this fact in view. They are sturdily and simply constructed and will give continual service all year round.

Logging and industrial locomotives are a specialty with us. We are prepared to construct any special types or submit specifications.

If you are in the market we will be pleased to hear from you.

We are also builders of stationary boilers, suitable for contractors and industrial plants.

Canadian Locomotive Company, Limited, Kingston

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

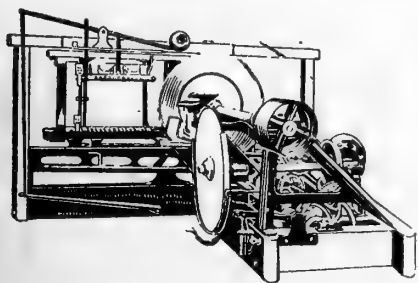
Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

The Pioneers

We alone manufacture the Genuine "DUNBAR" Shingle Machines—other machines advertised as such are imitations.



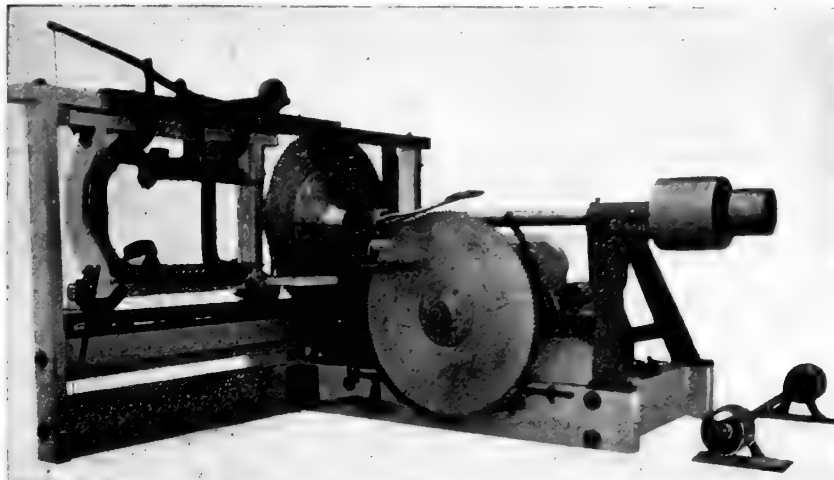
Operating our "Dunbar" Shingle Machine one man will joint and sort from 16 to 45 thousand shingles in a day of 10 hours. Good shingles too.

We are Canada's Pioneer Shingle Machine Manufacturers, and we respectfully solicit correspondence from lumber manufacturers.

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson Mfg. Co.

Fredericton, N. B.



"Dunbar" Shingle Mill

THIS mill is acknowledged the most complete and satisfactory shingle mill on the market. It has a capacity of from 15000 to 45000 per day according to the quality of the lumber.

Our literature contains full particulars.

Maritime Foundry & Machine Wks.

Limited

Chatham,

New Brunswick



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MANUFACTURERS AND BUILDERS OF

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CIRCULAR AND CYLINDER

MACHINERY

STAVE HEADING AND BARREL

TOOLS

SAW AND LOGGING

For the Manufacture of the Following

STAVES	HEADING
BARRELS	KEGS
COOPERAGE	WOODEN WARE
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CLOTHES PINS	LUMBER

COMPLETE PLANTS

FOR THE MANUFACTURE OF

BARRELS, KEGS, STAVES AND HEADING

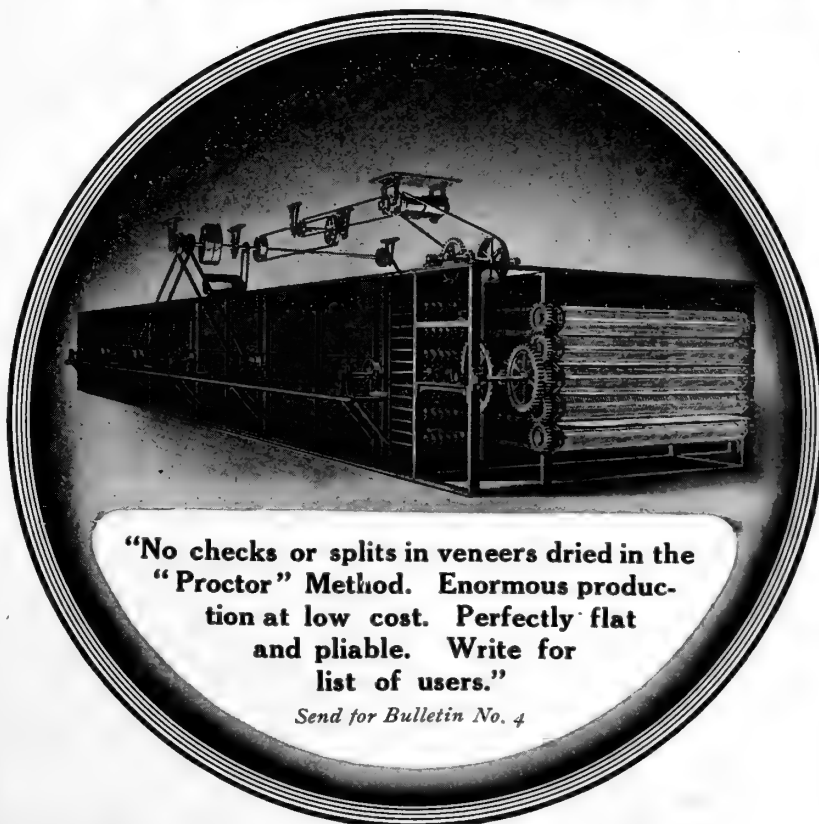
OUR SPECIALTY.

FOR PRICES AND FURTHER PARTICULARS,
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THE PETER GERLACH CO. CLEVELAND, O. U.S.A.



"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the "Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

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THE PHILADELPHIA TEXTILE MACHINERY CO.

PHILADELPHIA, PA.

The Mark



of Quality

Cut Your Cutting Cost



DIRECT ACTING STEAM FEED
WITH MODEL "D" VALVES

A STEAM FEED, especially when fitted with our model "D" valves, is such a great time saver over a friction feed that it will make an enormous increase in your lumber production, with no additional labor.

Do not decide that your boiler capacity is too small until you have consulted our engineering department. The power required by our feeds is surprisingly small, and we will *guarantee results* on any installation.

We make these feeds in all sizes, including one for *your* requirements.

SHALL WE SEND OUR BULLETIN? IT'S WORTH WHILE.

The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver
Gorman, Clancey & Grindley, Calgary and Edmonton

Represented by:

Stuart Machinery Co., Ltd., Winnipeg
Williams & Wilson Ltd., Montreal

This Mill Is Just As Good As It Looks

THE Campbell Lumber Company of Weymouth Bridge, N. S. have been using a Pony Mill like this since 1906. Some little while ago we wrote them to ask how they liked it. Here is their letter :—

"In reference to our Pony Bandmill we have cut over 500,000 ft. of hardwood logs with our Bandsaw and have found it entirely satisfactory."

"We have also sawn a great deal of hard, frozen wood in the winter time, which we are pleased to state has been a great success, and if the saws are properly taken care of, there is no trouble in cutting the above stock with a Pony Band mill such as you have sold us."

If you are cutting small logs, you need a mill—like this.



The Waterous 6 ft. Pony Mill

carries out the promise of its appearance in the work it does. It is a sturdy, compact, well-balanced mill in which every part is built to turn out good, well sawn lumber. It is a nice mill to handle.

Built as single or double cutting, it will take saws up to 8" wide, has a clear cutting space of 36" and a falling down space 30" wide.

There are a lot of these Waterous Pony Bandmills in use in Canada at the present time. If you are interested in what other users say of the mill let us send you an address of an installation in your neighborhood.

Details and specifications on request.

The Waterous Engine Works Co., Ltd.

H. B. Gilmour, Vancouver, B.C.

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"FROST KING" METAL

\$5,000,000.00

worth of mixed metal
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Our thirty five years experience in metal mixing enables us to place on the market a babbit that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

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Pine Doors and
Frames

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Balusters

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WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
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OUR
"EXTRA"



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VANCOUVER

The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL



BOILERS

"INGLIS" boilers are the product of over 50 years' experience and study combined with the most modern equipment for boiler making.

"INGLIS" boilers are made in every type and all sizes.

Let us quote on your requirements.

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Time is Money

The rapid cutting File is the economical File

Files Branded

American - Arcade - Eagle - Great Western
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are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



Electric-Welded Boom Chain

25% {More Weld} = 25% {More Strength} = 25% {More Wear}

(Sheared Toggle) * T Bar Hook * Two (Sheared) * Forged Toggle
and Ring and Link * Toggles and Ring

Made in Canada

Write to

Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.



GREAT STRENGTH AND DURABILITY

Dick's Balata Belting, the best known fabric belt in the world, is specially distinguished for great strength and durability. Most gratifying results have been obtained from Dick's Belts as regards retention of strength. There are cases on record where Dick's Belts have been running for over twelve years and not only have retained their strength, but show not the slightest signs of wear and tear.

Write for Catalog on "Transmission Appliances."

DICK'S Balata Belting Leather Belting Wood Split Pulleys Shafting Hangers Iron Pulleys
Steel Pulleys Saw Mill Supplies Clutches Babbitt Wood-Working Machinery Steam Goods

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Fairbanks Scales
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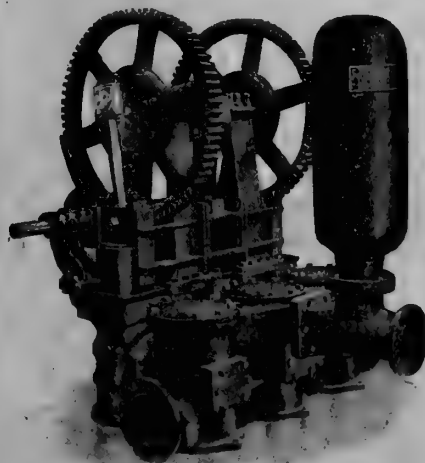


THE BELT YOU WILL EVENTUALLY USE

BECAUSE—It withstands heat, cold, damp, wet and chemical fumes.
BECAUSE—It is uniform in thickness and runs true.
BECAUSE—Of its great strength, almost twice that of oak-tanned double leather.
BECAUSE—It costs no more, all things considered.

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Sole Makers MONTREAL

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER



We stand
behind our Pumps
Entire satisfaction
guaranteed

**The Smart-Turner
Machine Co., Ltd.**
Hamilton - Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

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MONTREAL

Midland Planing Mill Products

THE LEADING STOCK LINES



Our New Catalogues for 1914
Will be sent upon request. Write for Discounts.

WE ANNOUNCE THE FIR DOOR

This door, lately introduced from the West, is justly popular because of its adaptability for a variety of oil finishes. It matches Georgia pine trim perfectly, and can be stained to match various hardwoods, Chestnut, Oak, Ash, etc.

We believe that the Fir Door is going to be "The Door." In line with our policy of Progress, we manufacture it, and are the first Eastern firm to do so. We lead,—watch the others follow us.

This places the Fir Door within reach of all consumers in the East, as we carry a large stock in fourteen different stock sizes, and can make odd sizes for prompt delivery at short notice. Our new Door Catalogue gives full particulars.

"Bargain Day at the Shook Mills"

On Monday March 30th, 1914

We will accept orders for a large stock of goods which must be sold to make room for our 1914 designs. This consists of discarded stock designs, over-runs, and a few unfits and cripples.

Doors, Sash, Mouldings and Miscellaneous Millwork

An equal chance for all, and a large stock to choose from. Write for complete information, and remember the date

Monday March 30th, 1914

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company

CACHE BAY Limited - - ONTARIO

Manufacturers of

**Lumber, Lath and
Dimension Timber
Planing Mill
Dry Kiln**

FOR SALE

All Dry Stock

1	Car	5/4 x 4 & up x 6/11	Shipping	Cull	White	Pine	
2	"	5/4 x 4 x 10/16	"	"	"	"	
2	"	5/4 x 5 x 10/16	"	"	"	"	
4	"	5/4 x 6 x 10/16	"	"	"	"	
4	"	5/4 x 7 x 10/16	"	"	"	"	
2	"	5/4 x 8 x 12/16	"	"	"	"	
1	"	6/4 x 4/7 x 10/16	"	"	"	"	
4	"	6/4 x 8 x 12/16	"	"	"	"	
4	"	2 x 4/7 x 12/16	"	"	"	"	
4	"	2 x 8 x 12/16	"	"	"	"	
1	"	5/4 x 8 & up x 10/16			Box	White	Pine
1	"	2 x 12 x 10/16			Mill	Cull	White
2	"	6/4 x 6 & up x 12/16	No. 1, 2 & 3	Cuts	White	Pine	

WRITE FOR PRICES

The Colonial Lumber Co., Ltd.

Pembroke, Ontario

"Good Day! Mr. Hocken

I want some more of that good
lumber of yours—some

Hemlock Pine and Hardwoods"



Our mill is running day and night so we can make prompt
shipment of special bills.

Hocken Lumber Company, Limited

Otter Lake Station, Ont.

Long's Bull-Dog Ten Years Ago and To-day



TO-DAY

The Trade-Mark that stands for Good
Lumber—Prompt Deliveries and
Square Dealing.



TEN YEARS AGO

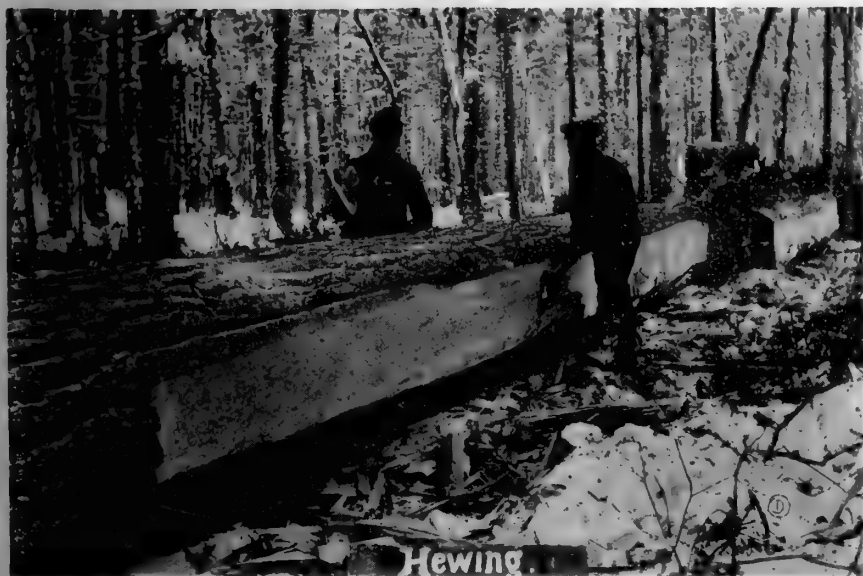
WE take this occasion, on our tenth anniversary, to thank our many patrons for the business they have tendered us and we hope for a continuance of these pleasant relationships.

Our stock lists are at your disposal. Send for a copy.

The Long Lumber Company, Hamilton, Ont.

ONTARIO

Canada's Banner Province



Ontario's timber production last year valued at \$26,774,937 or 40% of Canada's total output.

Pine production,	354,260,008 ft. B.M.
Pulpwood,	131,434 cords.
Railway Ties,	5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.

For maps and full information regarding Ontario, apply to

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Minister of Lands, Forests and Mines.

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and Laths**

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"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow
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Timber for R. R. Construction and
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Manufacturers of **YELLOW PINE LUMBER**

Mills:—

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Long Leaf Timbers,
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and
Railroad Material

Send your inquiries and orders to:—

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Cedar Shingles
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Look where you will,
"Bromley's" is the best stock in sight
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PINE

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Shingles

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Pembroke, Ont.

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Dry Factory White Pine—All thicknesses.

Nice Line 1 x 4 and up—6/11 Moulding White Pine.

Casey-Shaw Lumber Co.

Limited

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Manufacturers of
Lumber and Lath,
Planing Mill Work

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Hemlock, Pine and Spruce Bills

cut to order.

We have a good stock of White Pine, Red Pine, Jack Pine, Spruce and Hemlock.

Planing mill in connection with sawmill at Fesserton.

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Selects
Shops
Commons
and
Mouldings



Timbers
Yard Stock
Clears
and
Mouldings

The East Kootenay Lumber Co.

Limited

Head Office: JAFFRAY, B.C.

Mills at: CRANBROOK, B.C., RYAN, B.C., JAFFRAY, B.C.

Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

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Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**

J. B. SNOWBALL CO., LTD.

Chatham, New Brunswick, Canada



View of yard and mill—J. B. Snowball Co., Ltd., Chatham, N.B.

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**Spruce, Pine, Hemlock, Hardwood, Lumber,
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We solicit your enquiries.

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no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.

The rates are most reasonable, write us.

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Mills: St. John, N.B.

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SPRUCE**

13 Foot and 16 Foot

**Lath and
White Cedar Shingles**

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149 Broadway, New York City

JOHN P. NEWMAN

Saw Mill and Novelty Works. All
kinds of Hard and Softwood Lumber.
Dimension Stock in Beech, Maple and
Birch. Mattress and Cot Frames, Etc.
*Send me your requirements, I can furnish
you stock that will please.*

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White Pine, Norway Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and
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Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

Hardwood Flooring

The Celebrated Diamond Brand
End Matched, Bored,
Polished and Bundled

Manufactured by
SIEMON BROS., LTD.

For prices write
W. T. EAGEN
Selling Agent for Ontario and Quebec
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Phone M. 2814 TORONTO

**Watchman's
Portable
CLOCKS**

We are the only MANUFACTURERS
in America

WRITE US FOR DETAILS

Hardinge Bros., Inc.
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Lumber

We are in the market for the
output of mills manufacturing

**White and Red Pine
Spruce, Jack Pine
or Hemlock**

also the output of mills manu-
facturing any or all kinds of
Canadian Hardwoods — Write
us at once. Will pay the high-
est cash prices and ship stocks
out promptly. We are buying
now our 1914 stocks. Write
us giving list of lumber you
have or amount you expect to
have this season.

**C. G. Anderson Lumber
Company, Limited**

Manufacturers and Strictly Wholesale
Dealers in Lumber

**206 Manning Chambers
Toronto**

WE Buy, Sell and deal in all kinds
of Lumber and Timber in Can-
ada and United States: Spruce,
White Pine, White and Basswood, Ash,
Cedar, Douglas Fir, Beech, Birch, Wal-
nut, Cherry, Chestnut, Cottonwood,
Hemlock, Maple, Norway Pine, Short
and Long Leaf Yellow Pine, Oak, Red-
wood, Birch, Maple and Oak Floor-
ings, Pulpwood Ties, and Cedar Poles.

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**The Canada Wood
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Manufacturers:

Lumber, Hardwood Flooring,
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Stock, Cheese Box Hoops,
Heading, Baskets, Etc.

Write, Telegraph or Telephone
your orders

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**R. LAIDLAW
LUMBER CO.**

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FOR SALE

For Immediate Shipment
Hardwood Lumber

**Moulding, Sash and
Doors**

SPECIALTY: Dressing of wood
in transit on the Intercolonial
Railway.

The Rimouski Industrial Co., Ltd.
Rimouski, P.Q.

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N. Y.

James W. Sewall

For eleven years my business has been growing. Since 1910 I have made detailed timber estimates and maps of over 700,000 acres of land. In 1913 on one contract alone I planted 200,000 trees. Experience and system aid correctness and efficiency. Let me serve you.

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IN LOGGING OPERATIONS

My reports show where the waste is, and how it may be eliminated.

D. E. LAUDERBURN, Forest Engineer
56 Worth Street, NEW YORK, N.Y.

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Southern Hardwoods

Cypress, Kiln Dried North
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gressive
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Planing of all kinds done by carload. Railroad Switch in connection with mill. All classes of building material, lime and cement for sale.

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Let us quote you on the following Specials:

10,000 Ft.	4/4	1st and 2nd Basswood
100,000 "	5/4	" " "
40,000 "	6/4	" " "
2,500 "	8/4	" " "
2,500 "	16/4	" " "
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11,000 "	6/4	1st and 2nd Brown Ash
2,000 "	16/4	" " " "
12,000 "	8/4	" " Soft Elm
1 Car	4/4	No. 2 C. & B. Brown Ash
48,000 "	4/4	No. 1 " Soft Elm
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10 Cars 1 3/8—4 Ft. M. R. Pine Lath

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 All Sizes and Grades

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10/13-ft. Spruce and Hemlock

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Cedar Shingles, Fir and Cedar Lath

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Large and Long Timbers
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The Heavier it is the Better we like it

**We Dress from 1 to 4 Sides up to
16-in. x 20-in., 60-ft.**

Our grade is positively right, and prices will please

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Mills at Craigs on the B.C.E.R.

Shipment by C.P.R.R., G.N.R.R. or B.C.E.R.R.

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We Own one hundred thousand acres of the best virgin Southern Hardwood timber.

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We Cut Forty Million feet of hardwoods annually and carry 15,000,000 feet in stock.

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The World's Best

HERE are six styles of axes that are made from special crucible steel bit and capable of retaining an edge longer than any other axes made.

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"66"

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Get our Prices and Particulars.

The Mack Axe Works
Beaver Falls, Pa., U. S. A.

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The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 16-ft. Slash table. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |

POWER PLANT

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| 1 24 x 36 Slide Valve Engine with 40-in. x 12-ft. extra heavy double arm split fly wheel. |
| 2 Double Duplex, high pressure Water Pumps. |
| 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam. |
| 2 125 h.p. Water Wheels. |
| 1 Upright Engine for sawdust conveyor. |
| 1 10 h.p. Engine. |
| 1 Mitts & Merrell Hog. |
| 1 Wood Machine for 22-in. wood. |
| 1 Wood Machine for 16-in. wood. |
| 1 Edger for ripping dry lumber, installed. |
| 1 Edger for ripping dry lumber, not installed. |
| 1 30 h.p. Generator, 250 volt. |
| 1 30 light arc generator. |

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and rails and turn-tables, particulars of which may be had on application.

Also, contents of machine shop, containing Planer, Drill, Lathe and Machinery, with tools necessary for repair work.

All of the above open for inspection at Parry Sound.

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| 1 Automatic Filing Machine for 12-in. D.C. band saws. |
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United States Manufacturers and Wholesalers seeking Canadian Business

LOUISIANA RED CYPRESS

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POPLAR ASH

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Specialty:

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Below is a list of Dry Lumber
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- 2 cars 4/4 No. 1 Common.
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- 1 car 5/4 1s and 2s.
- 2 cars 6/4 1s and 2s.
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- 2 cars 5/4 No. 1 Com.
- 2 cars 6/4 No. 1 Com.
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- 2 cars 4/4 1s and 2s.
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Quick shipments direct from our own mills and yards.

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STRAIGHT OR MIXED CARS.

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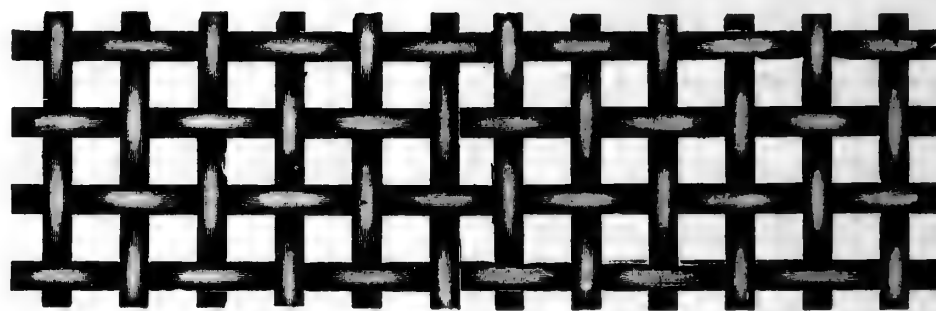
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	16 oz. "	9.00 "
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Stewart's Pure Condition Powders	2 lb. air tight can	4.50 "
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Palmer's Family Remedies are Sold with the Strongest Guarantee

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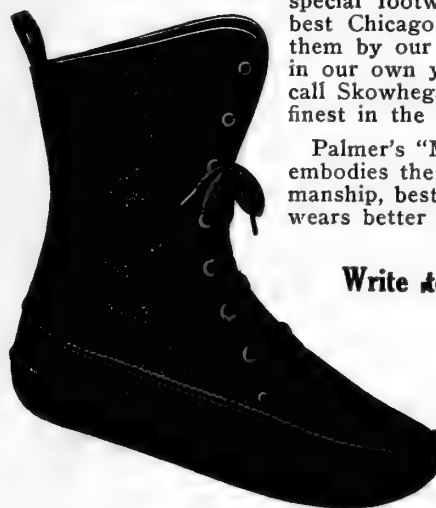
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You men working in damp places, wet undergrowth and rough ground, know how little use ordinary boots are to you.

What you want is a pair of our special Lumbermen's Boots, made of the best leather procurable for money—made by men who have spent their lives making quality footwear. We have been over thirty years making the famous

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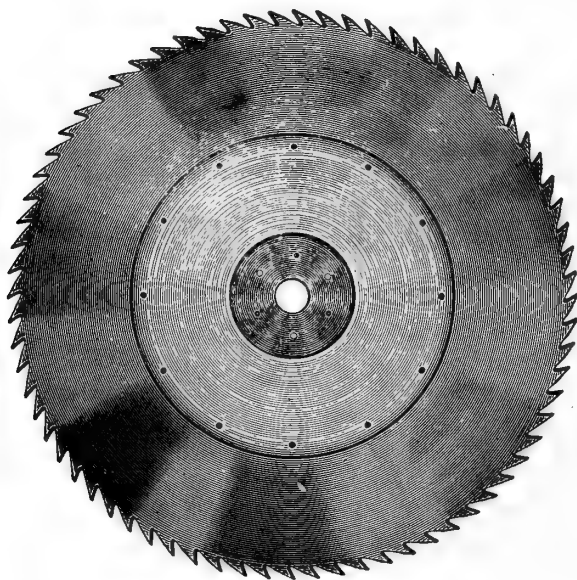
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With
The
Keen
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The ability to produce high grade saws is a manufacturing fine art in which we are well informed.

Radcliff saws are without a superior. They are made in all types and sizes. Our shingle and heading saws are of an extra fine grade of steel, made expressly for the purpose, unexcelled for toughness, temper and cutting qualities.

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All kinds of
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cranes for
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6 tons capacity.
Boom 65 feet.
Steel Boom and
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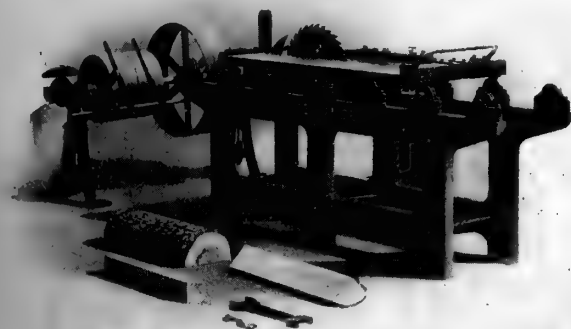
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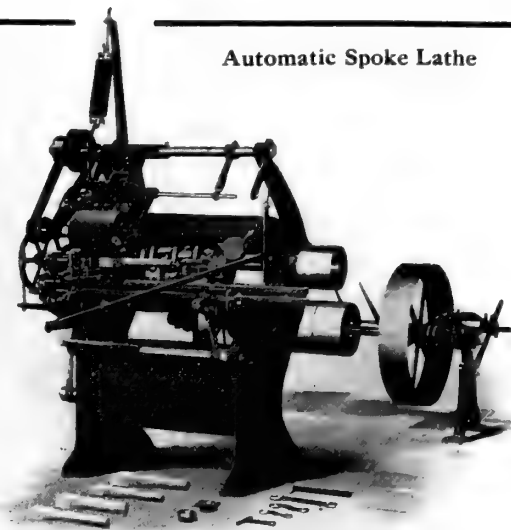
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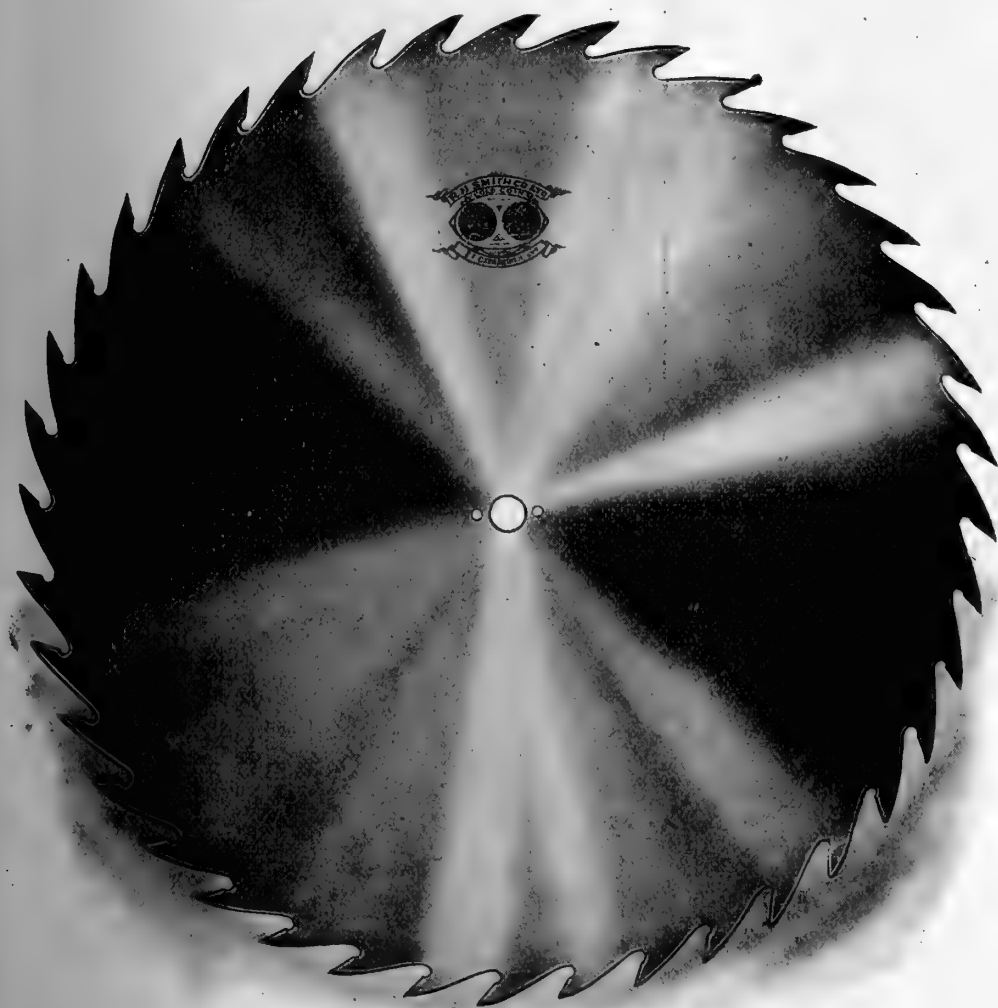


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Automatic Spoke Lathe

The Defiance Machine Works, Defiance, Ohio, U.S.A.



Solid and Inserted Tooth Circular Saws

We make a specialty of these lines

**We remake old Solid Tooth Saws
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These saws will stand up to their work better under all circumstances, and being made of a higher quality steel than it is practical to use by the old method, they hold an edge longer and will do more work than any other saw on the market.

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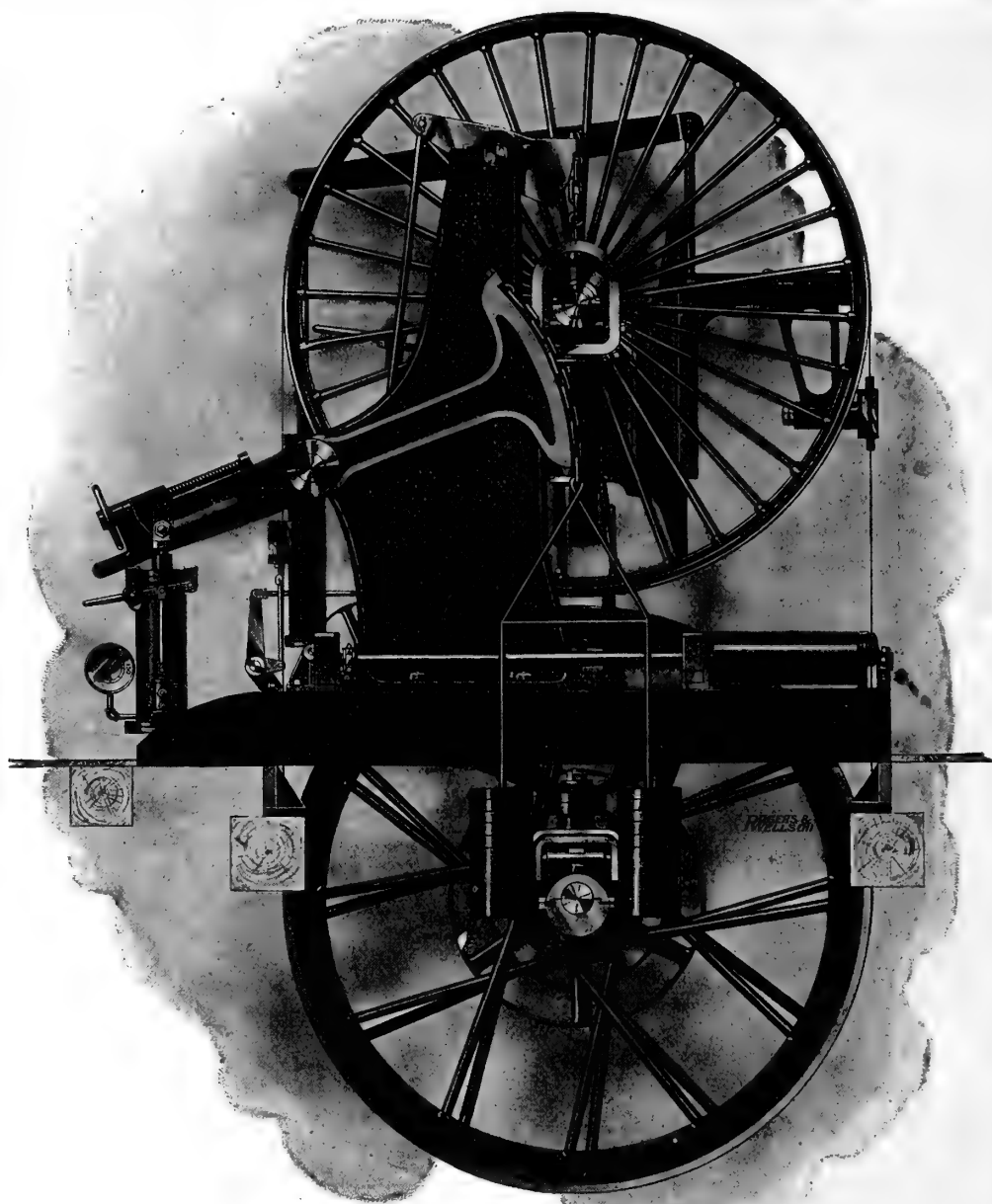
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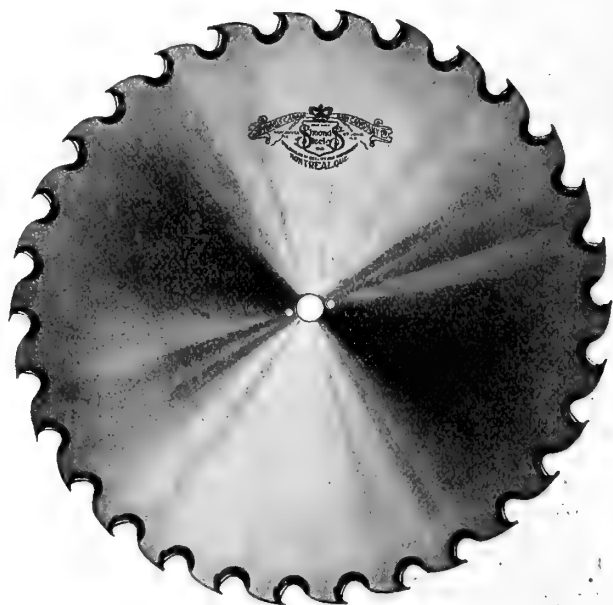
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, March 15, 1914

No. 6

The Mississaga Timber Problem

The problem presented by the timber which was blown down in the Mississaga Reserve, in Northern Ontario, last fall is one which calls urgently for solution, if the province is to save the valuable timber already down and reduce the risk of fire sweeping through the reserve and destroying one of the most valuable stands of white pine now remaining on the face of the globe. Attention has been called to the situation already in these columns, and we believe that the government has done what it considered best under the existing conditions, but unfortunately, the efforts of the government do not yet give evidence of bringing about satisfactory results. A sale was recently advertised of some of this timber, in the hope that by having it removed the government would realize its value and reduce the fire risk. But the offers were so small that no sale resulted and the question still remains to be solved. We would draw the attention of our readers and especially the attention of the government to the letter published elsewhere in this issue, written by a resident of Thessalon, Ont., who is in close touch with the situation and whose opinion is representative of the opinion of those in the district who are in a position to appreciate the circumstances.

The writer of this letter, Mr. J. B. Dobie, estimates that the timber is worth \$7,000,000 at least, and that the government could build a railroad into the reserve for \$500,000, thus giving the district the advantage of a railroad and also saving the timber. The case which Mr. Dobie makes out appears so reasonable, that the government ought to give it immediate attention and to announce its plans, one way or the other. From the information furnished by Mr. Dobie, it appears highly probable that the building of a railroad would open a district, not only of great timber resources, but one rich in minerals, which may be expected to create traffic and assist the railroad in paying for itself from the start. Mr. Dobie believes that the recent failure of the government to secure satisfactory offers for the timber, was

the result largely, of the absence of railroad facilities for taking in supplies to the camps which would be established in the reserve. With this handicap removed, he asserts that the government would be able to obtain bids for the timber which would represent, by the increased value, the total cost of the railway. Moreover, he believes, that it is quite feasible to build such a road and have it ready for operation by next fall. These statements make out an exceptionally strong case and lumbermen in Ontario would like to see the government act upon it without delay.

In a nutshell, Mr. Dobie's case is simply this: the timber is there; it is very valuable; a large portion of it is on the ground, in danger of destruction and causing great fire risk; the district needs a railroad and gives fair promise of supporting one through its extensive timber and mineral wealth. Previous to the storm of last fall, the government was well-advised in holding this timber for future operations, but to-day the situation is completely altered.

The Trade Journal and the Trade Association

There is a remarkable similarity between the mission of a trade journal and that of a trade association as evidenced in such conventions as that which was held recently at Buffalo, by the National Wholesale Lumber Dealers' Association, which is reported elsewhere in this issue. First of all, we wish to impress our readers with the importance of the convention referred to from several points of view, and then to say a little about the trade journal and its work. This convention at Buffalo was the outgrowth of the association spirit as developed and brought into effective existence by a great body of wholesale lumber dealers in the United States and a number of them in Canada. Its foundation is based upon the fact that "in union there is strength." Its activities are wide-spread and of great value. It promotes good fellowship among the members of the trade. It enables them to avoid many of the troubles and losses which are so difficult to avoid without co-operation. In a word, it is a "clearing house" for trade problems, and by its means, the course of trade is simplified to a wonderful extent.

Having laid its foundations upon the principles of good fellowship, it is not surprising that the association should have extended its boundaries so as to take in its fellow-traders in Canada. Nor was it surprising that, in the course of time, the feeling of international goodwill thus engendered should have resulted in the appearance of a member from Canada, upon whom the choice of the association should fall, as a fitting man to occupy the important position of president. Circumstances have worked naturally towards this end and Canadian lumbermen will feel that they have been personally complimented by this generous conferring upon one of them, of one of the greatest honors in the gift of the National Wholesale Lumber Dealers' Association.

The growth of this association and its great increase in usefulness leads to the second suggestion made at the beginning of this article; that the trade journal has in some respects a field of usefulness quite similar to that of the trade association. To point the way out of difficulties, to bring about a feeling of good fellowship among members of the trade and to increase the opportunities for trade for its readers, are among the chief objects of a trade journal, just as they are for a trade association. Perhaps these facts could not be more clearly or more interestingly put forward than in an article, also appearing in this issue, by a contributor who has been doing his share through a series of articles to assist our readers in British Columbia in their trade troubles. The last of this series of articles, written by one who, on account of his modesty prefers to be known under the pseudonym of "Douglas Fir," deals with the trade journal and its readers. Caustic and critical as this article and its predecessors have been in their references to lumbermen in western Canada and their business methods, the criticisms have been tempered with good nature and probably have sunk in deeper on that account. They should be read and analyzed carefully, as they contain many homely and important truths which will repay minute study.

National Wholesalers Annual Meeting

Matters of Much Importance Dealt With—An International Love Feast—Gordon C. Edwards, of Ottawa, Elected President—Reports of Year's Business

The twenty-second annual meeting of the National Wholesale Lumber Dealers' Association, which was held at Buffalo on March 4th and 5th, although one of the most successful business meetings ever held by the Association, developed early upon the first day into a remarkable international love feast, which had its fitting climax on the afternoon of the second day when Mr. Gordon C. Edwards, of Ottawa, Ont., the former vice-president of the Association, was borne into the convention hall upon the shoulders of his friends, to accept the honor of having been elected to act as president of the Association during the year 1914.

The business sessions of the meeting were characterized by that snap and vigor which have always been present at these meetings, and the result was that a very long and important business bill-of-fare was dealt with expeditiously and effectively. The attendance at the convention was very large, members being present from all parts of the United States, and many parts of Canada. The president, Mr. N. H. Walcott, Providence, R.I., occupied the chair and called the meeting to order at 10.30 a.m., on Wednesday, March 4th. From then on, until about 4 p.m., on Thursday, March 5th, the business affairs of the convention were put through in rapid order.

After the preliminary matters had been attended to, the president delivered his annual address, in which he referred briefly to the work of the year, which had been a very trying one. The various departments of the Association had increased in usefulness, especially the Bureau of Information, the Legal Department and the Transportation Bureau. Through these departments, they had been able to save many thousands of dollars for their members during the year and he believed that any wholesale lumber dealer, who was not a member of the Association, would immediately become a member, if he could see the work done by the executive committee and Board of Trustees. In looking about for some means of increasing the usefulness of the Association, the president had come to the conclusion that the large number of lumbermen's clubs throughout the country ought to be brought together under the leadership of some such body as the National Wholesalers, who could represent them in all questions relating to the lumber industry and trade.

The Secretary's Report

The secretary, Mr. E. F. Perry, in his annual report stated that the past year had been one of greater activity than any year since he had been appointed secretary. This had been caused undoubtedly by the seeming unrest and uncertainties in the business world, and more especially by the unusually marked inconsistencies of business, which he believed had been brought about by unnatural causes. The lumber business was an erratic one and responded to changing conditions, seemingly without much regard to scientific reasons, and consequently, was slow to readjust itself.

Among the subjects referred to by the secretary was that of "terms of sale." This matter had engaged much of the attention of the Association during the year. Experience seemed to indicate, beyond any possible question, that lumbermen were becoming more and more convinced of the importance of having sales contracts include technical terms of settlement and realize more than ever the fact that the terms and results of settlement had a serious effect upon profits.

The report of the superintendent of the Bureau of Information stated that the results of the year's work had shown more closely than ever before the worth of the Bureau as a specialist in lumber credits. It had revised on an average 35 reports daily. In order to do this, at

least 13,000 requests for statements of assets and liabilities had been made, and approximately 22,000 special enquiries were made of lumbermen outside of the Association. Over 26,000 names had been placed on the Association's tracers and 48,000 special enquiries had been sent to members. Not included in this were hundreds of special letters required in investigating in a manner different from the formal enquiry. An examination of the reports showed a larger percentage of statements of assets and liabilities than formerly. A hard process of education was bringing many a retailer to the point where he would find it to his advantage to give complete information. If the Association could insist upon each subscriber furnishing a list of his customers, it would do so, because of the great value of such information. During the past year, 73 new lists had been sent in, and many instances could be pointed out in which they had saved a doubtful or back account.

The year had been started with claims on hand amounting to \$260,000. New claims had been received amounting to \$272,000. Statements and adjustments had been made to the extent of \$300,000, leaving in the course of settlement \$232,000. "No man's Judgment is infallible," said the report, "and if you find an account reaches the point where it requires action, we believe, the Bureau offers the best possible facilities for collection. Numerous instances could be specified where the Association obtained results when others failed to do so, and this is not accomplished because of any particular trick or system, but for the simple reason that our demands for payment are backed by an organization prestige which the unscrupulous debtor fears, and knows he must respect if he would continue in business.

"An ordinary attorney cannot give you this benefit. He can dun or sue, but many accounts are collected more expeditiously by moral suasion than through the courts, and our experience shows a much larger percentage of collection through the Association by demands and careful handling of each individual case, than through attorneys."

Overproduction and Restricted Credit

The Committee on Trade Resolutions presented an interesting report, in the course of which the following reference was made to trade conditions:—"Our trade is suffering, with all lines, in the country, from the tremendous liquidation we are passing through. The overhead expense of many firms is eating into their surpluses, and in many cases lumber is being made and sold at prices which admit of no profit, a proceeding which is, if it is anything, a disgrace to business enterprise and intelligence. The ambition of some of our larger institutions to indefinitely increase their output has brought some disasters. One north-western lumber magnate confessed that they were trying to run three mills where two would produce all the lumber they had been able to sell. Over-production and uncalled for development of all kinds have been carried to such a degree that great demands have been made and banks have given unusual loans. There is a shortage of money the world over and we cannot hope for better conditions, until (in a sound manner) credit takes the place of cash."

"You may be able to see in your own observation of trade conditions," said the report, "and in the information which the Association has disseminated among its members, that there is need of closer co-operation of the manufacturer, wholesaler, retailer and the wholesale consumer, to the end that unfair practices and discrimination be eliminated by mutual consent, and a better basis of business established by a universally distributed acknowledgement of the benefits of strictly enforced principles.

"The administration of some phases of the lumber business is



Group showing some of those attending National Wholesalers' Convention at Buffalo, at which Gordon C. Edwards, of Ottawa, Ont., was elected President for 1914.

carried on with only a partial improvement over what it was 50 years ago. In fact, in some sections and some lines there has been no change. This has resulted in stocking lumber from habit instead of accurate facts and prospects. It seems to me that under the auspices of our organization a monthly bulletin could be sent to our own members and the secretaries of similar organizations, in which significant and important reports could be placed in the hands of those who need them. It has become a custom for secretaries of Chambers of Commerce and Board of Trade to keep in touch with other secretaries by correspondence or meetings so that any improvement or economic principle may have the widest and quickest application possible. This co-operation is simply adding to the strength of the fabric of which we are all a part, and every factor of strength in the field we work in, adds to the possibility of our own success. Properly carried out, and the points intelligently selected, a great deal can be done along this line with but little cost.

"The lumber business, like all others, is in a state of transition. Organization is simply an element of business. Its tendency is, not to take the place of individual effort, but to protect the fruits of such effort. Co-operation does not offer anything in the way of artificial props, but simply insures harmony among factors related to each other, whether in close proximity or not. Association has the function of encouraging individual effort and not discouraging it, and it is especially needful in this period of adjustment, that each one look well to his own affairs and as far as possible increase his own independence and thus make himself a dependable support to the new structure which we are inevitably forming."

Railway and Transportation Report

The report of the traffic manager contained a great deal of detailed information regarding the important work carried on by the Railroad and Transportation Committee during the past year. The disputed railroad claims handled during the year numbered 857 and involved sums amounting to \$17,683. Collection had been effected in connection with 346 claims, totalling \$7,036. Claims to the number of 382 remained unsettled on March 1st, 1914. They involved \$7,688. The report dealt in detail with a large number of important transportation questions which had come up for consideration during the year, and in connection with which the interests of the Association had been carefully represented and watched over.

A number of other reports were presented dealing with matters of interest to members of the Association and were dealt with in routine manner, becoming accepted and adopted. They will all appear in the printed report of the annual meeting.

An interesting discussion took place in connection with a proposal made by one member that the Association should support the railroad companies in their application for a general increase of 5 per cent. in the rates which they are permitted to charge for carrying freight. The object of the proposal to support this application was to enable the railway companies to make a profit consistent with the increased cost of operation. It was felt by those who supported the proposal, that an early decision by the Interstate Commerce Commission upon this point, in favor of the railroads, would enable the latter to go into the market again as extensive consumers of lumber and would place them upon a far more certain financial foundation.

Considerable criticism of this proposal was presented by other members, some claiming that high freight rates were already preventing them from conducting their logging operations in such a manner as to prevent leaving valuable timber in the woods. A suggestion was also made that it would be more fitting for the railway companies to squeeze a good deal of water out of their stocks before being permitted to increase their freight rates. The result of the discussion was that the question was submitted to the committee on resolutions, who brought in a resolution urging an early decision by the Interstate Commerce Commission upon this point, but not committing the Association to an expression of opinion as to the advisability of the advance of 5 per cent.

The Resolution Committee also brought in resolutions supporting the Forest Products Exposition; favoring a tax upon the yield of timber instead of on the land; and opposing any charge by the railway companies for placing and removing cars upon private tracks.

Election of President

During the convention session on Thursday, March 5th, the president, Mr. N. H. Walcott, introduced the proceedings which resulted in the selection of Mr. Gordon C. Edwards, of Ottawa, as president for the ensuing year. It was customary, he said, to call for an expression and opinion from those present as to who should be appointed president, and that the matter should then be left with the Board of Trustees. He then called for an expression of opinion upon this subject.

Mr. F. R. Babcock, Pittsburgh, Pa., after a few introductory remarks, said that the man who seemed to occupy their consideration this year as the most fitting member to be selected for president was

one who embodied all its necessary qualifications. He had been for ten years or more a member of the Board of Trustees and had been most efficient in every manner in connection with his efforts on behalf of the Association. He had attended every meeting of the trustees, and when he was on the executive committee had allowed nothing to interfere with his obligations in connection with the Association. He was a man of rare ability, who had the interests of the Association at heart at all times. Furthermore, he came from their sister country—Canada—so that his appointment as president would assist in establishing the Association as one of international scope. It gave him a great deal of pleasure to recommend that Mr. Gordon C. Edwards, of Ottawa, be their president for the year 1914.

Mr. C. H. Prescott, Jr., Cleveland, Ohio, seconded the motion and stated that he had known Mr. Edwards from the time of his earliest connection with the Association. He had always been loyal and capable, and was able, in every way, to represent the Association properly.

Mr. Gordon C. Edwards in replying to the retiring president's announcement that he had been honored with the position of president for the present year, expressed his deep appreciation of this honor. He felt sure that the honor was one which would be greatly appreciated by all his Canadian brethren in the lumber trade.

New Trustees Appointed

The Committee of Nominations reported the following members as their recommendations for the vacancies upon the Board of Trustees:—W. W. Knight, Indianapolis, Ind.; M. E. Preisch, North Tonawanda, N.Y.; B. J. Betts, Philadelphia, Pa.; Alex. Wilson, Pittsburgh, Pa.; C. F. Treadway, New Haven, Conn.; A. L. Stone, Cleveland, Ohio, and C. H. Hershey, Newark, N.J.

In the evening of Wednesday, March 4th, an excellent smoking concert was given by the Buffalo and Tonawanda lumbermen. Splendid talent had been engaged and the event was most enjoyable. A musical entertainment for the ladies was also given on Wednesday evening.

A Splendid Banquet

On Thursday evening, March 5th, a banquet was held at the Iroquois Hotel, at which there was a very large attendance. The banquet was remarkable for the enthusiasm of all present and the jovial manner in which they entered into the musical proceedings. Many specially prepared songs were sung, practically all present taking part. For this purpose a programme of the songs containing the words had been distributed at the commencement of the banquet. A large number of ladies were present at the banquet and added greatly to the pleasure of the evening. The toast list was arranged with much skill. It included three excellent speakers and the toast master, John Archdeacon Murphy. The first was by Hon. Thos. Upton Sisson, Congressman for the 4th Mississippi district, whose address was entitled "Shall We Mortgage Posterity." The address was an excellent one in which the speaker denounced the present day policy of increasing war expenditures. These would saddle upon posterity, a debt which they could not pay and which the present generation had no right to impose upon them. It would be impossible to do justice to this address in any other manner than by a verbatim report.

Hon. Rodolphe Lemieux, ex-Postmaster General of Canada, was the second speaker and he delivered a most eloquent and inspiring address upon Canada. The final address was delivered by Mr. Edward F. Trefz, field secretary of the Chamber of Commerce of the United States, who explained in a speech of great force and conviction, the work of the Chamber of Commerce.

Senator W. C. Edwards, of Ottawa, Ont., was one of the guests at the table of honor at the banquet and spoke briefly when called upon, expressing the pride he felt in the selection of his nephew, Mr. Gordon C. Edwards, as president of the Association.

The greatest commendation is due to those who had in charge the preparation of the details in connection with the banquet. The menu for the banquet was inserted in an attractive leather-bound note book, containing specially arranged pages and index for jotting down memoranda of a trip to the United States.

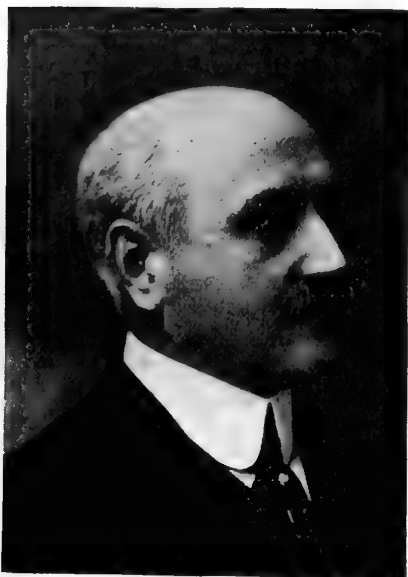
Election of Officers

At the meeting of trustees following adjournment of the annual meeting, the following officers were elected: President, Gordon C. Edwards, Ottawa, Ont.; First Vice-President, W. W. Knight, Indianapolis, Ind.; Second Vice-President, A. L. Stone, Cleveland, Ohio; Secretary, E. F. Perry, New York; Treasurer, Henry Cape, New York.

Among the Canadians present at the convention were Gordon C. Edwards, Ottawa; A. H. Campbell, of the Campbell-MacLaurin Lumber Company, Montreal; W. A. Filion, of E. H. Lemay & Company, Montreal; Guy H. Long, and J. M. Donovan, of the Long Lumber Company, Hamilton; R. G. Cameron, of Cameron & Company, Ottawa; Frank Hawkins, secretary of the Canadian Lumbermen's Association, Ottawa; D. McLaren and C. W. Wilkinson, of the Union Lumber Company, Toronto.

A Courteous Compliment to Canada

National Wholesalers Elect Gordon C. Edwards, of Ottawa,
as President for the Current Year



G. C. Edwards, New President
of National Wholesalers

firm of W. C. Edwards & Company, Limited, to which the new president belongs.

Mr. Gordon C. Edwards has taken a very active interest in lumber association work for many years and has been one of the most energetic members of the National Wholesale Lumber Dealers' Association. The active interest which he has taken in this association naturally marked him out for a prominent executive position and he has advanced by annual stages until, during the present year, he has achieved the highest office upon its executive. There is no question that the association will benefit greatly by this appointment and also that the mutual goodwill existing between lumbermen of both countries will be materially increased by this courteous evidence of brotherly feeling.

Mr. Gordon C. Edwards was born at Thurso, Que., on November 12th, 1866, a son of J. C. Edwards, of Ottawa, and a nephew of Senator W. C. Edwards. He comes, therefore, from one of the best known lumbering families in the Ottawa Valley. Although a large lumbering business had already been built up in the Ottawa Valley, under the name of Edwards, before Gordon C. Edwards came into the world, he is a notable example of a self-made man. He started in the lumber business with W. C. Edwards & Company, Limited, at Rockland, Ont., in the spring of 1885, and from the very first, set himself to master all the intricate details connected with the business. His first occupation was measuring lumber. Then in the fall of 1885 he went to the woods for the Canada Lumber Company of Carleton Place, Ont., (a company with which he was connected, being one of its directors). During the winter of 1885 and 1886, he was engaged in scaling and inspecting logs for this company and in the spring of 1886 he entered the company's yard at Carleton Place and measured and shipped lumber for that season. In the following winter, that of 1886-7, he accompanied one of the inspectors of W. C. Edwards & Company, Limited, in their woods operations on the Nation, Blanche and Gatineau Rivers, his main object being to obtain a thorough knowledge of the woods operations. In the spring of 1887 he took charge of a mill for the Canada Lumber Company at Mississippi, Ont., and in the fall of the same year was appointed secretary-treasurer of the company and took up his quarters at their head office at Carleton Place, where he obtained a thorough knowledge of the books and accounting department of the business. In the year 1892 he joined the Ottawa Lumber Company of Ottawa in the wholesale lumber business.

In 1895, when W. C. Edwards & Company, Limited, purchased its New Edinburgh plant near Ottawa, Mr. Gordon C. Edwards returned to the employ of this company, first in the capacity of salesman and shortly afterwards as manager, a position which he still holds. The company at New Edinburgh carry on a wholesale and retail lumber business, in addition to operating planing mills, hardwood flooring mills, sash and trim factory, etc. In 1892 Mr. Gordon C. Edwards was elected a director of W. C. Edwards & Company, Limited.

Mr. Gordon C. Edwards, although in charge of one of the largest lumbering concerns in the Ottawa Valley, extends his interests to many other companies, clubs, and charitable institutions. He is a past president of the Canadian Club of Ottawa; past president of the

Y. M. C. A. of Ottawa; member of the Council of the Ottawa Board of Trade; president of the Capital Planing Mill Company, Ottawa; secretary-treasurer of the Library Bureau of Canada, Limited, Ottawa; president of the Ottawa Construction Company, Ottawa; vice-president of the Dominion Warehousing Company, Ottawa; director of the Imperial Realty Company, Ottawa, and director of the Ottawa & Hull Power & Mfg. Company, Ottawa. He is also connected with the following companies outside of Ottawa, in each of which he is a director: Robinson-Edwards Lumber Company, Burlington, Vt.; Manufacturers' Lumber Company, New York; Cascapedia Manufacturing & Trading Company, Cascapedia, Que., and Simplex Floor Finishing & Appliance Company, Limited, Montreal, P.Q.

His club interests include the Rideau, Laurentian, Country, Ottawa Hunt and Royal Ottawa Golf, of Ottawa, together with the York Club of Toronto, the St. James Club of Montreal and the Transportation Club of New York. In addition to these Mr. Edwards is also a member of several fish and game clubs.

Mr. Gordon C. Edwards' interests in association work induced him to be one of the most active promoters of the Canadian Lumbermen's Association, of which he was the first president and is still a member of the Board of Directors.

The largest mills operated by W. C. Edwards & Company are situated on the Ottawa River at Rockland, Ont., some 25 miles east of Ottawa, where the company operate two sawmills and a planing mill. Their Ottawa plant consists of a sawmill, three planing mills, hardwood flooring mill, sash, door and trim factory, cutting-up mill and box factory and five retail yards. They are also holders of large quantities of spruce, hemlock and hardwoods. In addition to the interests already mentioned they are interested in the Cascapedia Manufacturing & Trading Company, Cascapedia, P.Q., and the Bathurst Lumber Company, Bathurst, N.B.

Cannot Export Shingle Blocks

The Court of Appeal has decided that sawn cedar blocks can not be exported from the province of British Columbia under the guise of "sawn lumber," thus upholding the judgment of Mr. Justice Clement in the suit of the Minister of Lands vs. Excelsior Lumber Company. The judgment of the Appeal Court was handed down at Victoria recently. This decision is of great importance to men employed in the shingle-cutting trade, for it will prevent any of the business of shingle-cutting passing to the shingle mills of Washington. The suit arose over the action of officials of the timber and lands department seizing several carloads of sawn cedar blocks en route for Washington in Great Northern Railway cars. These blocks were capable of being used as shingle bolts, and under the section of the act which prohibits the export of shingle bolts, the consignment was declared confiscated.

In claiming replevin of the goods, the Excelsior Lumber Company did not deny that the blocks were intended to be used for the manufacture of shingles, but relied on the portion of the act which exempts "other sawn lumber" from the general prohibition in regard to export. Mr. W. B. A. Ritchie, K.C., in his argument, pointed out that the blocks were sawn on every face, and had been manufactured as such in this province. Mr. A. D. Taylor, K.C., represented the province in the argument, which resulted in Mr. Justice Clement refusing to order replevin. His Lordship held that the blocks, though sawn, were really shingle bolts, and that the sawing done to them did not alter their character to the extent of causing them to be classified with the schedule of manufactured lumber as "other sawn lumber." The Excelsior Lumber Company entered an appeal, which was argued by the same counsel who appeared at the trial. With the exception of Mr. Justice Martin, who dissented, the full court upheld the judgment of Mr. Justice Clement. The cars of cedar blocks seized by the government were returned to the Excelsior Lumber Company as an act of grace following the decision of Mr. Justice Clement, with the understanding that no further export was to be attempted pending the result of the appeal.

Duty Wrongly Exacted

The board of United States general appraisers decided to-day that wood pulp and newsprint paper produced from wood cut on Crown lands in the Province of Quebec had not been assessed by the Dominion Government with countervailing duty when exported to this country, and that, accordingly, free entry should have been granted when imported here under the Canadian Reciprocity Act of July 2, 1911.

The action of the collectors of customs at Detroit, Buffalo, Burlington, Plattsburg and Port Huron, in exacting duty, was reversed. The importers included the Laurentide Paper Company, Limited, William A. Bird, the Central Vermont Railway Company, and others. A somewhat similar claim was made by the News Pulp and Paper Mill Company, but overruled for lack of evidence.

New Brunswick Receipts Show Increase

Crown Land Department Reports Greater Payments on Licenses, Renewals and Royalty—Large Sum Received for Bonuses—Results of Year's Operations

The fifty-third annual report of the Crown Land Department of the province of New Brunswick for the year ending October 31st, 1913, has just been published. The receipts of the Department for the year amounted to \$773,274.74. After deducting \$271,720.69 which was received for land sales and bonuses and goes to the sinking fund, the net revenue is shown at \$501,554.05. The revenue of the Department, which is of interest to the lumbering industry is as follows:—

Receipts	Year 1912	Year 1913
Sales of Timber Licenses	\$ 3,145.00	\$ 18,169.50
Renewal of Timber Licenses	80,708.00	81,236.00
Stumpage	339,604.18	305,818.62
Royalty	4,649.70	13,510.39
Transfers of Timber Licenses	4,037.00	1,472.00
Bonuses Timber Licenses		255,335.76

Record Receipts for the Department

The Minister of Lands and Mines, in his preface to the report says that all records of receipts from territorial revenue were broken during the year. The principal increase was derived from the bonus on the timber licenses authorized by an act of the legislature last year. This legislation was probably one of the most important measures ever placed upon the Statutes of the Province and settled for at least twenty years the tenure and conditions upon which lumber is to be cut upon our Crown Lands. It was a matter that received the utmost consideration and the best thought of the Government, and the result has been a great source of satisfaction to your Executive and myself in the manner in which it has been received by the public and the satisfactory way its stipulations have been met.

A constant demand had been made by lessees during the last few years that the Department should disclose some policy with regard to the future disposal of the Crown leases and while many projects were put forward by the lumbermen, none of those had the approval of the Government, whereby the public would receive a fair return for the granting of these valuable privileges.

I was fairly convinced the lessees were making a reasonable request even five years before the expiry of the old licenses (1st August, 1918) when they asked to have a future tenure fixed in order to afford a guarantee for the large amount of capital invested in the lumber industry and particularly to afford security to the Banks and Trust Companies who are called upon to make large advances in the carrying on of the lumber business. We therefore brought into existence the "saw mill license" which provided that every lessee would have the right to renew his license for a period of 20 years provided he agreed to pay a reasonable bonus according to the value of the land and also agreed to pay such a revised rate of stumpage and mileage as might be fixed from time to time by the Lieutenant-Governor-in-Council. To arrive at this valuation I took the best means at my disposal to have the lands placed in four classifications, viz., A, B, C, D, the respective bonus rates being \$100 for Class A, \$75 for Class B, \$50 for Class C and \$20 the present upset price for Class D. While I do not claim the classifications made were perfect, I do maintain, that, as a whole, an equitable arrangement was made and satisfactory on the whole to the lumbering community of the Province.

Under the provisions of the Bill I have taken steps to procure a more detailed classification of the public lands to be completed by the 1st August, 1917, setting aside the tracts suitable for agriculture and segregating lands only fit for the growth of lumber.

The provisions of the Bill respecting pulp and paper licenses will appeal to every fair minded person as legislation in the interests of the Province, whereby fifty per cent. of the lumber cut under this class of license must be manufactured into pulp and paper in New Brunswick.

Out of a total quantity of 10,147½ square miles under license last year, 9,654½ square miles have been renewed under the saw mill license; 116 square miles have been renewed under the pulp and paper license and 377 square miles were renewed under the Old Act which expires 1st August, 1918, when the latter licenses will be put up for sale or otherwise dealt with as the Lieutenant-Governor-in-Council may decide.

The outcome has certainly been very gratifying to the Government and settles one of the hard problems of the past.

Owing to the stringency in the money market and in order to make the provisions of the Bill less onerous to the licensees I saw fit to divide the one half payment due on August 1st, 1913, accepting one half of the bonus in cash and the other half by note at 5 per cent. payable 1st August, 1914. This arrangement was largely accepted and appreciated by the licensees. Considerably more than half has been paid in cash.

The Cut of Lumber

Referring to the cut of lumber during the year the report says:— In comparing the stumpage receipts with last year there will be observed a falling off of nearly \$34,000 which is perhaps a matter of some congratulation. For some years it has been considered by the Department that we were cutting very nearly up to the annual growth and possibly may have been exceeding it, leaving nature to battle against these adverse conditions. Stringent regulations have been made from time to time to prevent undersized cutting and in some localities more drastic conditions will have to be enacted in order to perpetuate our forests. There is no doubt a policy of thinning might be advantageously carried out if conducted under competent men, but a general policy of that kind might not give the necessary results. These and other matter with respect to the forest growth are receiving my best attention.

From the present outlook the cut of lumber this year will not be up to the aggregate of last season but while this may result I anticipate a larger revenue from stumpage dues.

For a good many years the rates of stumpage have not increased with the same ratio as the increase of the price of lumber or the increased value of lumber lands generally. While there was a disposition on our part not to place unjust burdens on the lumbering community, we thought with all fairness stumpage rates could in some instances be advanced, commensurate with these increased prices. A new schedule of stumpage rates was approved, and became effective August 1st last. I am quite satisfied the increases so made have been fair to the lumbermen and justly due the Province.

Notwithstanding the dullness of the money market the stumpage dues and renewal rates were well met on the first of August. There were few complaints of overscaling which in a large measure is due to the very satisfactory system now in force, over the 10,147½ square miles under license.

The only fire of any considerable importance was that which occurred at the Head Waters of the Tobique on lands under license to Messrs. Stetson, Cutler and Company. New Brunswick, was fortunate during the past year in having so few fires of a serious nature. Precautions were taken, however, and orders issued to every warden in the Province to be alert at the first appearance of forest fires. A time will come, however, when these fires will menace the forests and large grants must be annually set aside to provide for this service and a necessary force must always be kept in hand to fight the fire demon.

A recapitulation of timber licenses shows that 10,145½ square miles were renewed during the year and new applications were granted for 92 square miles, making the total now under license 10,237½ square miles.

Statistics of Crown Lands Operations

The quantity and kind of lumber cut from Crown Lands, for which stumpage bills were rendered during the year, with the amount charged thereon is shown in the following table:—

Kinds of Lumber	Quantity	Stumpage
Spruce and pine logs	173,106.846 S. Ft.	\$222,991.80
Fir logs	58,492.475 "	46,793.98
Cedar logs	21,725.578 "	27,156.97
Hardwood logs	2,399.765 "	1,919.81
Hemlock logs	11,194.195 "	4,477.80
Hemlock logs peeled	2,752.296 "	.....
Poplar logs	550,000 "	400.00

270,221,155 S. Ft.

Wood (fire and pulp)	1,015 Cords	631.80
Hemlock bark	733 "	586.40
Sleepers	334,319 Pieces	8,357.97
Posts	1,850 "	27.75
Telegraph poles	60 "	9.00
Boom poles	6,000 "	120.00

\$313,473.28

Add old accounts	\$3,405.80
Less allowances	1,552.42

1,853.38

\$315,326.66

Deduct unpaid accounts	9,508.04
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Paid Provincial Treasurer	\$305,818.62
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The appendix to the report contains the new timber regulations passed on August 1st, 1913, and the Forest Fire Law of the province.

St. Maurice Timber Well Protected

Annual Meeting of Association—Report Shows Successful Record During a Very Dry Season

The excellent work which is being done by the St. Maurice Forest Protective Association, with headquarters at Three Rivers, P.Q., was reviewed and discussed at the annual meeting and dinner, held on February 24 at the Place Viger Hotel, Montreal. Mr. J. M. Dalton, of the Gres Falls Company, presided at the annual meeting, and those present were: E. J. Graham, James MacLaren Company, Buckingham, P.Q.; Mr. O'Niell, of the E. B. Eddy Company, Hull, P.Q.; W. C. Hughson, of Gilmour and Hughson, Hull, P.Q.; Carl Riordon, J. B. White, and E. Read, Jr., of the Riordon Pulp and Paper Company, Montreal, P.Q.; J. E. Rothery, of the J. MacLaren Company, Buckingham, P.Q.; P. MacLaurin and Alex. MacLaurin, of the Gres Falls Company; J. Sutherland, of the Department of Public Instruction; J. M. Spaidal, Quebec and Lake St. John Railway; J. H. Dansereau; W. H. Parker, of the Laurentian Fish and Game Club; S. L. de Carteret, of the Quebec and St. Maurice Industrial Company; R. F. Grant, of the St. Maurice Lumber Company; F. L. Ritchie, of the Wayagamac Pulp and Paper Company; Ellwood Wilson, of the Laurentide Company, Grand Mere P.Q.; and L. E. Parent, of the St. Agathe Mills.

In his report, the President pointed out that the association, the only one of its kind in Canada, had during the past season demonstrated its usefulness and the value of the principle of co-operation. Although the summer was the driest since 1908 the actual fire damage was less than 1/1000 of one per cent. of the value of the timber on the territory patrolled. The association has had a steady growth, 102,000 acres having been added to its territory in 1913, and, so far this year, over 266,000 acres have been added. The Hon. Jules Allard, Minister of Lands and Forests, and Mr. W. C. J. Hall, of the Forest Protection Branch, had heartily co-operated, while the manager, Mr. Henry Sorgius, and the inspectors had worked loyally in the interests of the members. The extension of telephone lines and the erection and equipment of look-out stations were recommended. The greatest need at present was the better education of farmers and settlers, and the president suggested that the association request the co-operation of the Minister of Education, asking him to distribute suitable literature in the schools and to send lecturers, equipped with either lanterns or moving picture machines, to the small towns and schools.

The Work of the Year

It was stated in the manager's report that during the past season a fourth division, comprising railway patrols, was established. The area patrolled pertaining to members of the association was 7,279,053 acres, or 11,373.52 square miles. This figure does not include Government lands not under license or lots taken up by settlers, which latter were the greatest source of danger and the scene of 50 per cent. of the fires. The area patrolled pertaining to members was equivalent to 16¼ per cent. of one-sixth of the lands under license in the Province. This area was divided into four divisions and twenty-five districts, sixteen of which were each patrolled by two men in canoe; five, each by one man on horseback or on foot; and four, each by two men on motor car. Of the fires, totalling 306, settlers started 115, 51 settlers were fined; 17 fires were started by river drivers; eight by fishermen and sportsmen, and 17 by railways.

The railways under the jurisdiction of the Board of Railway Commissioners of Canada and the Quebec Public Utilities Commission were required to patrol their rights of way at their own expense. The National Transcontinental Railway, being still under construction, did not come under either of the above, so was patrolled by the association, the cost being borne equally by the Transcontinental Commission, the Provincial Government and the Association. The part patrolled was from Lake Mesquety to Parent, a distance of 167 miles. Five motor cars were used—four in continuous service on regular beats, the fifth being kept ready in case of emergency. The report also stated that as the result of their experience, it was demonstrated that the spark arresters are not spark-proof and do not give the protection which is claimed. As the cost of extinguishing fires fell largely on the limit holders, the government should be asked to pay half the actual cost, instead of the present contribution of \$1 per man, per day.

Eight lookout stations and fifteen miles of telephone wire were constructed during the past season, but more lines are needed to form an adequate system. Two hundred miles of trail and portage were cut. The patrols travelled 60,805 miles.

The manager made the following recommendations:—That the association request the Provincial Government to:—Amend the Forest Laws, to require all persons desiring to burn clearings or debris in the vicinity of the forest at any time of the year, to obtain first a written permit from the ranger in charge of the district; that the government pay half the actual cost of fighting fires; that it be made obligatory for every citizen to respond to the call of fire rangers for

assistance to fight fires; that the association confer with the Superintendent of the Forest Protection Branch and the Superintendent of Public Instruction in regard to the free distribution of literature relative to Conservation and Forest Protection, in both languages, to the school children throughout the province.

In the course of a discussion, Mr. E. Read, Jr., gave details of the telephone lines at the Riordon Pulp and Paper Company's limits at St. Jovite, P.Q.

Mr. J. C. Sutherland stated that the Provincial Department of Public Instruction was anxious to co-operate with the association in educating the children on questions of conservation, the value of forests, and protection from fire, and any suggestions from the association would be very sympathetically considered. Two years ago the Department issued to every school in the province circulars in English and French dealing with conservation, and also took steps to impress on the minds of the scholars the importance of forestry subjects.

The Chairman referred to the important part forest protection held in the educational programme in the west, where literature on the subject is furnished to all the schools.

The question of permits given by government officials to settlers to burn slash was also briefly discussed, and complaint was made that in one instance a permit was granted during the close season. It was suggested that the government should place the authority to issue permits in the hands of the association, which would safeguard the interests of limit owners.

More Assistance Asked from Government

It was decided to request the government to give further assistance in protecting the forests, such additional money to be spent in fire protection and not in appointing additional inspectors. The resolution pointed out that the provincial revenue from forests last year had been \$1,760,466, with an expenditure of \$327,383, while there had been appropriations of \$18,000 for fire protection, \$90,000 for forest service and inspection, and \$5,000 for forestry education. They therefore asked that the amount voted for fire protection be increased to \$50,000 at least.

On the motion of Mr. Ellwood Wilson, it was agreed to ask the Dominion Government to require the Transcontinental Railway to patrol and clean their right of way at their own expense.

A committee will be appointed to call, at Ottawa, a meeting of all limit holders in the province with a view to forming protective associations for the Ottawa, Gatineau and Lievre Valleys, and also to forming a federations of such associations.

It was decided to continue the present plan of assessing all members for the cost of emergency fires, and a new by-law was passed in substitution of the one putting such cost on individual members.

The balance sheet showed an income of \$23,779, and an expenditure of \$23,054, \$725 being the back balance.

The following new members were admitted: Tourville Lumber Company, Charlemagne and Las Quareau Lumber Company, and St. Gabriel Lumber Company.

Election of Officers

The following officers were elected: President, Mr. S. L. de Carteret; vice-president, Mr. Ellwood Wilson; manager and secretary-treasurer, Mr. H. Sorgius; directors, Messrs. J. M. Dalton, S. L. de Carteret, Charles Le Brun, R. F. Grant, F. L. Ritchie and Ellwood Wilson.

At the dinner in the evening Mr. Ellwood Wilson presided. There was only one toast—"The King"—and with the exception of the speech of Hon. Jules Allard, Minister of Crown Lands and Forests, the proceedings were more or less informal. Mr. Wilson referred to the assistance given to the association by Mr. Allard, and to the foremost place of the province in forestry work.

Mr. Allard expressed the appreciation the Provincial Government entertained for the work of the association in aiding its efforts to prevent the destruction of the forests of Quebec by fire. The province had many resources, but amongst the greatest were its closely related riches in forests and water powers. The government had, during the past few years, put into force a system of forest protection which had proved so effective that it had been followed by Ontario, with the result of a co-operation in this work between the two provinces which had proved of great economic advantage. It was the policy of the government to educate the public to the necessity for doing everything possible to prevent forest fires, and to show them that any negligence which might cause such a fire was really a crime. As to the demand of the association for \$50,000 a year for forest protection, he was not so certain as to whether it would be acceded to, as the government was pretty generous as it was, but he promised that everything possible would be done to protect the forests.

Mr. Clyde Leavitt, chief fire inspector of the Railway Commission and forester for the Conservation Commission, gave some details of the work of the former body in preventing fires. The Board had

required the railway companies, subject to their jurisdiction, to take reasonable measures to protect the forests, special patrols being the main thing in view. During 1912 arrangements were made for precautions in the West, and these had worked admirably. The situation had in fact greatly improved. The co-operative arrangements made in Ontario, Quebec and New Brunswick had also worked out well, especially in Quebec, with the result that there was not a single serious fire due to railways during the past season. While the system was not perfect, the results showed that the idea of co-operation was the right one. The inspectors' staff was to be increased and they looked for better results. The Federal Government realized that their lines should be adequately protected from fire. The association might perhaps take a broader view than protection only—it might consider the question of perpetuating quality as well as quantity of forest products. The methods which economic conditions forced lumbermen to adopt were destructive; there were very heavy depletions of white pine and birch in comparison with inferior lumber, such as hemlock, and it was important that they should find uses for these inferior species in a way which did not seem feasible at present.

Mr. J. Sutherland, Mr. W. H. Parker, and Mr. Carl Riordon also spoke briefly.

Mr. S. L. deCarteret outlined a scheme for the insurance of timber lands. They all, he said, insured their sawmills, but there was no insurance on limits, for the reason that the great bulk of them were in inaccessible territory, where no patrol could be made. He suggested the formation of a mutual insurance company in Canada and the United States, which would pool its interests to insure the limits. If premiums of $\frac{1}{4}$ of 1 per cent. were levied on the value of the standing limits, about two million dollars per annum would be received. He pointed out that, during the past ten years, the fire losses on patrolled limits had not exceeded $\frac{1}{2}$ of 1 per cent. and this was being gradually reduced to $\frac{1}{4}$ and $\frac{1}{8}$ of one per cent., while in the case of their own association the loss was $\frac{1}{1000}$ of one per cent. Such an insurance would involve the appointment of boards of valuation throughout the country. He thought $\frac{1}{4}$ of 1 per cent. would be a very reasonable rate, and sufficient to pay all expenses. In one instance in the Province of Quebec a company had insured its limits with Lloyds, but no damage was payable unless the loss was \$50,000, and there were other restrictions. The experience of their association was a basis for the formation of an insurance association.

Mr. James Lawler, secretary of the Dominion Forestry Association, Ottawa, asked for the assistance of the association in connection with a meeting to be held in Halifax in August.

At the conclusion of the speaking Mr. Ellwood Wilson showed a number of slides illustrating the destructive effect of forest fires in the Province of Quebec.

Riordon Company's Annual Report

For the year ended December 31 the profits of the Riordon Pulp & Paper Company were \$309,679, an increase of \$2,845. The net profits amounted to \$228,073, and, after payment of bond interest and preferred stock dividends, a balance of \$68,073 was added to profit and loss surplus, making a total of \$157,301. Mr. Carl Riordon, the president, in his report, states that improvements and additions to the plant at Hawkesbury were completed during the year, but owing to the business depression prevailing in Canada and the United States during the past year, the company were unable to market the full production, with the result that total sales during 1913 fell short of 1912 sales by \$98,946. The directors propose to reduce the current liabilities by the sale of bonds when the market is favorable, and, as the company was able to sell the full production during the last three or four months, it was reasonable to expect that when spring started they would be able to market the surplus product now on hand. About 84 per cent. of the company's production for 1914 was already sold at satisfactory prices. The outlook for the company's business for the current year was very good indeed. The production of sulphite pulp was increased at both mills by 30 to 40 per cent., and it was proposed to increase the output of the principal lumber mill this season by running the mill at night as well as in the day time, as prices obtainable were the highest ever received.

A recent report in these columns of the annual statement presented by the Anglo-Newfoundland Development Company, for the year 1913, contained an unfortunate error which made it appear that the company intended to carry out further extensions of its operations under the present Newfoundland tariff conditions. The statement should have been to the effect that "no further extensions" of the company's operations will be made during the continuance of the present Newfoundland tariff.

Mr. C. A. Larkin, of the C. A. Larkin Lumber Company, Limited, Toronto, has left on a six months' trip to Europe, accompanied by Mrs. Larkin and two daughters.

Talks With Lumbermen of British Columbia On Trade Papers and What They Mean

No. 7—By Douglas Fir

AND now friends, we are coming to the close of our talks, and I wish to tender you my hearty appreciation of the hearing which you have given me. If I were to judge the earnestness of your attention by your silence, or lack of interruptions throughout this series of talks, then I do not know what more any man could desire in the way of attention. But being something of a student of human nature, I feel quite safe in venturing the assumption that there are many subscribers of the Canada Lumberman who have never read these articles at all. I know of people who actually think that they have not time to read their own Trade Journal, and I pity them, and God only knows what the world will do when they are gone.

I once knew a stationary engineer, and a very good man he was too, but awfully narrow in his ideas. He knew absolutely nothing about his work except that which he had worked out himself. He would not learn from another, and I have many a time heard him scoff at the man who would read with the hope of acquiring knowledge that he could convert to practical use, and indeed, more than once did this man call me the "Scientific American Man," because I used to read that paper. Now life is so short for any one man to acquire all the knowledge that there is going on these days, by his own personal observations, and this is why an exchange of ideas, a diffusion of knowledge is necessary, and yet there are men in our business who will go many miles, and spend much time to be present at an association meeting, who think they have not time, or that it would be a waste of time to read the ideas of others in their trade paper. Personally I look upon the pen as being a mightier weapon than the tongue, though, of course, I know that there are some who take the opposite view. There are those who, if they were asked why they take their trade paper, would probably reply that they considered it good reading for the boys in the office, or perhaps others of their employees, but personally they had passed out of it. The man who knows it all in these days, and who does not want to swap information by the way side, as it were, with others who have perhaps been over the road which he may be just starting out upon, may waken up sometime to find himself mighty near the precipice at some turn where he least suspected danger, and then he will wonder at his plight. The danger sign may have been there in its proper place, but he either didn't have time, or else was too sleepy to read it. The man who does not read his trade paper is riding past the danger signals and does not know it, and then if he goes too fast at some point where he should have gone slow, and gets a tumble in consequence, he is loath to take any of the blame to himself. There are many valuable articles appearing in the Canada Lumberman from time to time, other than those from my pen, and the man who does not read them either is not able to appreciate them, or thinks that he carries such a superior store of knowledge himself that he has no need for more.

In this series of talks I have endeavored to point out to you many of the errors that are being made in the conduct of the business by some of those engaged therein. I know that in some cases I have gone from the sublime to the ridiculous, but not un-intentionally. Then I have directed your attention to one hundred things which ought not to be done. This also must be read with comprehension broad enough to cover the subject, if you would get the true meaning. I have given you about two hours and thirty minutes talk, at the rate of one hundred words per minute. The editor of the Canada Lumberman has been good enough to give his valuable space for the publication of these articles. Neither the editor nor the writer have anything to gain by this, except that you read, and you first are benefitted. We know that many cannot be benefitted without benefitting the business as a whole, and this is where we hope to come in for our little share. If we can only be instrumental in bringing about a few of the many, much needed reforms, we will feel amply repaid for all the effort we have given to this subject.

I might say that we did hope that we might have had an exchange of ideas upon this subject, and perhaps it is not time yet to abandon our hopes in this direction. It is a big enough subject, and important enough for a dozen writers, and still there might be important things to be said, so come along friends, and let us have your ideas. And now thanking you for your tolerance, and the Editor for his valuable space and co-operation, I bid you adieu.

Mr. F. M. Dixon, who was for some years with Smart-Woods, Limited, and Grant-Holden-Graham, Limited, has opened an office in the Beardmore Building, Montreal, for lumberman's supplies.

The Commercial Importance of Beech

Third of a Series of Articles upon Native Canadian Woods—A Wood with a Wide Range of Miscellaneous Uses

By R. G. Lewis



Typical Beech Tree growing in a close stand.

IN the Maritime Provinces in Canada, and in some parts of the United States, manufacturers often speak of birch, maple and beech as "the hardwoods." They do not distinguish between the three woods, but group them in a separate class from oak, elm, basswood, cherry, mahogany and other hardwoods.

The properties of beech are very similar to those of maple and birch and in many cases their uses are identical. Maple is stiffer and birch stronger than beech, but otherwise there is a general similarity in their physical properties. Sargent gives these properties for beech as follows:

Weight of dry wood—44.71 lbs. per cubic foot of dry wood.

Specific gravity—0.6883.

Ash—0.51 per cent. of weight of dry wood.

Fuel Value—92 per cent. that of white oak.

Breaking strength (modulus of rupture)—16,100 pounds per square inch or 128 per cent. that of white oak.

Factor of Stiffness (modulus of elasticity)—1,697,800 pounds per square inch or 128 per cent. that of white oak.

Generally speaking the wood of American beech (*Fagus grandifolia*) is very hard, tough, strong and heavy. It is moderately stiff and has a close, straight grain in old trees (young trees are often cross grained). The wood splits easily but is difficult to season; warping, twisting, shrinking and checking during seasoning. Once properly seasoned it holds its shape fairly well but is not durable in contact with the soil. The wood is both tasteless and odorless.

Lumber Takes a Good Polish

The finished lumber takes a good polish and wears smooth under friction. The heartwood is usually dark in color, and the sapwood nearly white. The sapwood is undesirable for most purposes. Many manufacturers claim that the use of beech would increase if the sawmills were more careful in separating heart from sap lumber. The color of the heartwood varies greatly according to soil conditions. Trees growing on deep, well-drained soil produce darker colored lumber which is claimed to be much superior in its physical qualities. This is often called "red beech" although it is not a separate species. In fact there is only one species of beech in America. The tree commonly called "blue beech" or "ironwood" (*Carpinus caroliniana*) belongs to another genus.

Some manufacturers say that "red beech" is merely the result of steam drying ordinary beech. Others call the heart of mature trees "red beech" and the sapwood "white beech." Considerable confusion seems to prevail in the use of these terms which should be considered merely as describing the color of the lumber and not the tree from which it is cut.

Beech in Canada ranges through the three Maritime Provinces, Southern Quebec and Ontario. It is not found north of a line running from Bay Chaleur westward, crossing the St. Lawrence in the neighborhood of Rivier du Loup and running a few miles north of the St. Lawrence and Ottawa rivers to Lake Temiskaming. From here the line dips south westward to Sault Ste. Marie. Beech is not found in Canada west of this point. In the United States the tree is found as far west as Wisconsin and Texas and southward to the Gulf of Mexico.

Canada cut a total of 15,417,000 feet board measure, of beech lumber in 1912. Ontario produced two-thirds of this amount, Quebec about 14 per cent., Nova Scotia 12 per cent., New Brunswick 6 per cent. and Prince Edward Island the small remainder.

A Valuable Railroad Tie Material

Canadian railways purchased in 1912 over 104,000 beech ties, and of these at least 90 per cent. while not white, were treated chemically before being laid in the roadbed. While beech possesses the strength,

stiffness and spike-holding qualities necessary for a tie material, it decays rapidly in contact with the soil and makes preservative treatment imperative. More ties of creosoted beech are used in European railways than of any other wood. Creosoted beech paving blocks have the strength and hardness necessary for an ideal wooden pavement. The wood is easily treated with creosote and the treatment usually results in an increased life of from three to four hundred per cent.

Beech in Canada has always ranked high for slack cooperage, coming sixth on the list for staves and heading. It is also used occasionally for tight staves in fish barrels on account of its lack of taste and odor.

The use of this wood has been restricted in the past because of the difficulties encountered in its seasoning. These same difficulties have given rise to unjust prejudices against many of our native woods. We import large quantities of red gum and oak from the United States and neglect our own birch, beech and poplar. Red gum is one of the most difficult woods on the market to season. It requires careful steam drying from the saw to overcome its tendency to warp and twist. The same careful treatment applied to some of our native woods would result in a lumber of at least equal quality. Beech is stronger than oak in many ways. It has a finer and more even grain and costs about one-third as much.

At the present time in Canada beech is probably used for fire wood more than for any other purpose. It is usually sold mixed with maple or birch and large quantities of the smaller and more inferior trees are used in this way.

Apart from its use as fuel, beech is used in greatest quantity in Ontario for the manufacture, by destructive distillation, of charcoal, wood alcohol and commercial acetates, although little wood is used for this purpose that could be sawn into lumber.

An average cord of wood yields about 46 bushels of charcoal, 7 gallons of crude alcohol and 130 pounds of acetates. The uses of charcoal are well known. Wood alcohol is used chiefly as a solvent for varnishes and shellacs. The acetates are converted into acetic acid (wood vinegar), ether and acetone.

Large Quantities Used for Flooring

The manufacturers of hardwood flooring use large quantities of this wood and often sell it mixed with birch for floors in dwellings. The wood is hard and close grained and takes an excellent polish. In factories and warehouses it makes an ideal floor which stands the wear and tear of truck wheels and other hard usage better than any other moderate priced flooring. This industry probably consumes the greatest quantity of sawn lumber of this species.

In the manufacture of furniture, beech has always been a popular material for framework and "inside work." It is seldom used for "outside work" in expensive furniture, although quarter-cut material exhibits a striking silver grain. The value of the wood for this purpose lies chiefly in its strength and the fact that when subjected to friction the surface tends rather to wear smooth than to develop inequalities. It is greatly prized for the manufacture of drawer slides, sliding parts for filing cabinets, extension table slides and all parts of furniture subjected to friction. The wood does not swell or shrink with changes in humidity and its use reduces the annoyance due to drawers and other parts becoming jammed. It is used in greatest quantity by furniture makers for "inside work" and framing on account of its strength and its ability to stand irregular strains and twists. It is also used extensively for "outside work" in the manufacture of the cheaper grades of furniture, especially chairs. Beech washes well and is free from taste or odor, and is prized for kitchen table tops and kitchen furniture on this account.

For interior finish, beech is valued more for strength than beauty of appearance, as the wood has little or no pronounced grain or figure except on quarter-cut material. It goes chiefly into door sills and stair material. Slack-cooperage manufacturers use beech for staves and heading in barrels used to contain products that would be spoiled by a wood with a strong odor. Its strength recommends it for nail kegs and hardware cooperage.

Beech is noted among our native woods for its ability to withstand friction when under water. The axles and shafts of old fashioned water wheels were made entirely of this wood. The knowledge of this quality in the wood has led to its use in laundry machinery where the wood is subjected to friction and is constantly moist. It

is not constant moisture which causes a wood to decay, but alternate wetting and drying.

In the Maritime Provinces of Canada this wood is used in greatest quantity for the manufacture of brush backs and handles, and its use in other parts of Canada for this purpose is also extensive. The wood is tough and resists splitting when nailed or bored for bristles, and is consequently valued for rough unpolished scrub brushes, stable brooms, kalsomine and whitewash brushes and paint brushes.

Extensively Used for Handles

Beech is used to a great extent in the manufacture of tool handles where great toughness and elasticity are not essential. For hammer and axe handles hickory will always be the favorite wood, but for the handles of wrenches, screw drivers, chisels, gouges, gimlets, corkscrews, awls and for plane blocks and spirit levels, beech is one of the best woods available because of its hardness and its quality of wearing smooth under friction. This wood is often used as a substitute for apple in hand saw handles. Two handles are cut from a pattern with a scroll saw from a piece $4\frac{1}{2} \times 1\frac{1}{4} \times 12$ in. The use of this wood for broom handles is very extensive in spite of its weight and dark color. The handles are turned from 2-inch squares about 5 feet long.

For agricultural implements and vehicles, beech is a useful wood, but is used more extensively in the Maritime Provinces than in Ontario. For all parts of framework where elasticity combined with toughness are not essential qualities the wood can be used to advantage. It is used in the Maritime Provinces for heavy spokes and gear stock. For all articles requiring a wood free from taste and odor, beech will always be a favorite. Boxes to contain foodstuffs, butter pails, lard tubs, ice cream freezers, meat and bread boards, packing house tables, butchers' blocks, skewers, kitchen furniture and woodenware, wooden plates and refrigerators are all examples of uses of this wood, due partly to its strength but mostly to its tastelessness. Bakers' woodenware such as peels, proofs, troughs, trucks and racks are often made of beech for the same reason.

Beech produces a strong, tough veneer that is used for a large number of commodities. This veneer is usually "rotary cut" or "peeled" veneer. The logs are steamed for several hours and then revolved in a veneer lathe against a heavy fixed blade which peels off a thin sheet of wood. The standard thicknesses run from $1/50$ to $5/16$ of an inch. The more usual thicknesses are $3/16$, $1/8$, $1/4$, $5/16$ and $1/20$, the great bulk of the product being of the $3/16$ thickness. This veneer is not used to cover cross banding or core stock for ornamental purposes like mahogany or oak veneer, but is used for what are called "built-up" products. Two or more layers of veneer are glued together usually with their grain at right angles, and the resulting product is used for chair seats and backs, drawer bottoms, panels, trunk boxes, vehicle body panels and packing cases. This "built up" lumber is stronger and lighter than solid material of the same thickness and is less likely to warp or split. Single layers of veneer are made into baskets, crates, berry boxes, butter boats and wooden pie plates or "picnic plates." Sawn veneer which is in reality thin lumber sawn with a special saw of large diameter is made into dry measures, cheese boxes and rims for sieves.

Good Material for Dowels

One of the most important uses to which this wood is put is the manufacture of dowels. The wood is sawn into squares of the proper size and kiln dried. It is then run through a machine which turns out the finished product. These long cylindrical rods of various diameters are bundled and sold to manufacturers of furniture, sash, doors and interior finish, who cut them to the lengths required for their work. They are used in place of metal to hold joints together and are often threaded. The dowels are driven into holes bored in the wood and are held in place by glue. Large quantities are used in Canada and there is also a large market for dowels in England. Birch forms the bulk of the dowels made in Canada at the present time, but beech is also used to a great extent. Coopers' pegs and tree nails for ship building are manufactured in a similar manner to dowels. The uncut dowel rods are often made into coops for poultry.

Numerous Miscellaneous Uses

Beech lumber has many miscellaneous uses which do not consume large quantities of wood, but are useful as suggestions for waste utilization. Wooden shoes are used in America in greater quantities than most people imagine. They are used by men employed in damp places such as tanneries, breweries, bakeries and laundries, as they are light and waterproof. Leather shoes with wooden soles are used in steel mills and glass factories to protect the workmen's feet from the hot floors. Most of this wooden shoe material is beech, as the closeness of the grain of this wood, and its density, fit it particularly for the purpose. Clothes pins are made almost entirely of beech and birch. Their cheapness is due to the perfection of the machinery used in their manufacture, which is practically automatic. The rough ma-

terial is fed into a hopper and the machines turn the pegs, cut out the slots and polish the finished article with soapstone in large cylinders, with practically no handling whatever. Bobbins used in textile factories are made of beech and birch and are also manufactured by specialized machinery. Most spools are made of birch, but beech is often employed for this purpose to advantage. The wood is harder than paper birch and does not hold its shape quite so well, but it turns smoothly and is easily polished. Spoolwood in the form of bars from $\frac{1}{2}$ -in. to $2\frac{9}{16}$ -in. square and from $2\frac{1}{2}$ to 4 feet in length is purchased by spool manufacturers, and must be clear stock free from all defects. The wood in Quebec is cut in winter and sawn to size in small mills where the spoolwood is piled in open piles for thorough air drying. It is usually shipped early in the following summer to the spool factories. The machinery is very complicated and highly specialized.

Other miscellaneous uses for this wood are in the manufacture of whip stocks, umbrella handles, wooden spoons and bowls, rulers, shuttles, bails for pails, barrel bungs and faucets, coat hangers, hames and pulley blocks.

Beech is a slow growing tree like yellow birch and maple, but grows to an advanced age. Its seeds, however, are heavy nuts which are not carried by the wind like the seeds of birch and poplar. Heavy seed years occur only at long intervals so the reproduction of this tree is not very rapid. The smooth heavy bark resists fire and the tree is not liable to attacks of either fungus or insect. The tree is shade enduring and can thrive under the shade of others. In close stands it develops a long straight trunk free from branches, as is shown in the illustration. It is not likely that this tree will ever be a commercial possibility from the standpoint of forest planting after the present supply is exhausted.

Sasgen Derricks and Winches

The handling of lumber manufacturers' stocks by derrick and hoist has reduced the cost per thousand greatly and has effected an important saving in time and labor. The Sasgen Derrick Company, 13 Jarvis street, Toronto, are patentees and manufacturers of lumber derricks and winches of the most practical and up-to-date type. These derricks are all fitted with steel and malleable castings which make the machines light, at the same time adding materially to their strength. The Sasgen Peerless circle swing steel derrick is claimed by the makers to be the most practical and convenient derrick for hoisting building material of various kinds. It is a full circle swing, portable steel derrick with self-lubricating bearings, folding mast and bottom, and can be used by hand, horse or power without changing the boom.

This progressive firm also manufactures single and double drum geared winches, which are made from malleable and crucible steel, including gears, and are equipped with band brakes, the double drum having a special lever for shifting pinions into or out of large gears, by which means both pinions are worked simultaneously.

The Sasgen Derrick Company will ship these machines to reliable or rated lumbermen on trial. A special illustrated pamphlet and price list will be mailed upon request.

Dominion Timber Cutting Regulations Altered

The timber-cutting regulations in the Provinces of Manitoba, Saskatchewan, Alberta, and the Northwest Territories and parts of British Columbia have been amended by order-in-council issued by the Dominion Government. As a result of the new regulations licensees are now required to pay the following dues on timber cut on licensed berths: Sawn lumber, 50 cents a thousand b.m.; lath, 15 cents a thousand; shingles, 15 cents a thousand; piling and cribbing, $\frac{1}{2}$ cent a lineal foot; railway ties, 8 feet long, $1\frac{1}{2}$ cents; railway ties, each foot over 8 feet long, $\frac{1}{4}$ cent; shingle bolts cut within the British Columbia railway belt, 25 cents a cord; cordwood, 15 cents a cord; and 5 per cent. royalty dues on all other products of manufacture not enumerated; none on slabs or sawdust, however. Saw logs cut in Manitoba, Saskatchewan, Alberta, the Northwest Territories and the Peace River tract, British Columbia, on Crown lands, shall be paid for on the product of manufacture thereof and those cut in the British Columbia railway belt on the feet board measure according to British Columbia log scale. The new regulations also provide that permits may be issued by the Minister of Interior in Manitoba, Saskatchewan and Alberta and the Peace River tract in British Columbia, to owners of portable sawmills.

Mr. Arthur E. Foulds has just opened a sales office in the Canadian Bank of Commerce Building, Brantford, Ont., as manufacturers' sales agent. He will carry a line of building materials, specialties and contractors' equipment. The experience with building supplies which Mr. Foulds has already had places him in a position to give good service, he having been for the past ten years on the executive of the Schultz Bros. Company, large contractors, of Brantford.

Splendid Growth of a Young Concern

Long Lumber Company, of Hamilton, Ont.,—Founded on St. Patrick's Day Ten Years Ago—
Turned Over Thirty-Five Million Feet Last Year



Guy H. Long, Hamilton, Ont.

Ten years ago, on the 17th of March, there was started at Hamilton, Ont., in a very modest way the foundation of the business now known as The Long Lumber Company, the founder being Mr. Maurice S. M. Long, whose untimely death in May, 1910, was deeply regretted by the whole lumber trade of the country. From this modest beginning, on St. Patrick's Day, the company has grown year by year, until to-day it occupies a prominent position in the Canadian lumber world. In 1913 the turnover of the company was over thirty-five million feet, the business having doubled itself during the past five years. The Long Lumber Company are wholesalers in white and red pine, hemlock, spruce, birch, yellow pine and cypress, shingles, lath, cedar posts and

and "Klimax" doors. They handle the complete output of several large mills including that of the Standard Chemical Company, of Longford and South River. The trade mark of the firm "The Bull Dog" is now widely known and stands for reliability, prompt shipment and quality.

The successful growth of the business has been due to Mr. Guy H. Long who is one of the best known men in the Ontario lumber trade. Mr. Long was born in 1881, and is the son of the late George Long, who, for many years conducted a successful coal and wood business in the city of Hamilton. After a preliminary education, he attended the Canada Business College from which he graduated at the age of 15. Shortly afterwards he obtained a situation as a junior in the office of a Hamilton lumber company. After receiving a grounding in business methods with this company, he sought to extend his activities and entered the wholesale lumber business. When seventeen years of age he was sent out upon the road. During this work he saw much of the lumber industry in Ontario. His ground was the Northern division and the majority of his larger customers were lumbermen. During the early part of 1905 he abandoned the road when the Long Lumber Company was formed, and entered into partnership with his brother the late Maurice Long. On the death of the latter in 1910, Mr. Long took into partnership Mr. Frank Burton, who, for several years previous had been in their employ. Mr. Burton may possibly be better known to the Ontario public as "Dutch" Burton, so prominently connected with football activities and captain of the Tigers Football Team in 1913.

In addition to his connection with the Long Lumber Company, Mr. Long is also president and principal owner of the Consumers Lumber Company, Limited, of Hamilton, which does a large retail lumber business in that city. He is also vice-president of the Vincent Company of South River; director of the Barton Binbrook Telephone Company; president of the Centennial Park Company, of Hamilton; president of the Ontario Basket Ball League Association, and is prominently connected with sports of all kinds, in which he finds time to take a keen interest.

The growth of the Long Lumber Company has been steady and sure. They commenced business with very little capital, but with conservative management forged ahead, extending their activities, until to-day they are covering the country with their travellers, and a staff of eight clerks, are kept constantly employed at the head office. On April 1st a change is being made in the staff and Mr. Roy Stewart who has been covering the Niagara district and Western Ontario will be located at the head office as sales manager; Mr. J. M. Donovan who has been for some time in charge of the Toronto office will take Mr. Stewart's territory and Mr. Geo. Wisner will take Toronto and Eastern Ontario territory. Mr. H. P. Brierley is the Hamilton traveller of the firm and Mr. R. Atkins is also working out of the head office.

To commemorate the tenth anniversary of the firm's inception Mr. Long is giving his employees a banquet at the Commercial Club, Hamilton, on St. Patrick's night.

Mr. Angus Carss, secretary-treasurer of the Carss Mackinaw Clothing Company, Limited, Orillia, Ont., manufacturers of lumbermen's and miners' clothing, left on a business trip to Western Canada on March 7th. His trip will take him through to Prince Rupert by way of Vancouver and he will return by the Grand Trunk Pacific, stopping at all the main points along that line.

A report from Quebec states that the outlook for the export business with Great Britain during the present year is encouraging. The same applies to the trade with the United States. An increased demand is already indicated and prices show some improvement. The English market is more active and ocean freight rates are lower.



F. R. Burton, Hamilton, Ont.



H. P. Brierley, Hamilton, Ont.



J. M. Donovan, Toronto, Ont.



Roy Stewart, Hamilton, Ont.

An Urgent Situation in the North

Fallen Timber in Mississauga Reserve Should Come Out at Once—A Railroad Would Simplify the Difficulty

Editor Canada Lumberman: Thessalon, Ont., March 14th.

Probably some of your readers are not aware that there lies some 50 miles north of the North Channel of Lake Huron an immense timber reserve, known as the Mississauga Forest Reserve, about two million acres in extent and estimated to contain from one to two billion feet of white pine timber, some of it, the finest on the continent. It is almost beyond doubt that 30 per cent. or more of that vast timber wealth was blown down by the great storm of November last, the same storm which caused such terrible disaster on the lakes.

The forest reserve is drained by the Mississauga river and tributary streams, affording ample facilities for getting this fallen timber out to the market; but there are no facilities whatever for getting supplies and outfit into the reserve, to carry on the operation of lumbering. It is also well known that the life of a blown down pine tree is limited under favorable conditions to two years. As soon as the action of the rains and the sun's heat and frost separate the earth from the roots, the tree becomes a prey to the borer, and is soon rendered of no value whatever. It is also true that the dead tops of such a large percentage of fallen pine make the best kind of material for forest fires, and if a fire once started in the reserve, with 30 or 40 per cent. of the pine tops down and dead, all the fire rangers in America could not stop it. Not only the fallen timber, but the standing timber as well, would become a prey to the flames, and that whole vast asset of nearly two billions of pine timber would become a total loss.

This is not a remote possibility, but is a near probability, and unless something is done at once to get a railway to that reserve next summer, the Province of Ontario is likely to lose between five and ten million dollars. Take the conservative estimate of the timber at one and a quarter billion feet; as matters stand to-day it could not be sold to lumbermen for perhaps more than \$1 per thousand feet stumpage in its entirety. With the advent of a railway the value of it would be increased to say \$6, or more per thousand, which for one and a quarter billion feet would mean over \$7,000,000.

A steam railway could be built 50 miles for say \$30,000 per mile average or one and a half million dollars, which would leave the government a net profit of five millions. But, as the railway at the outset would be required mainly for getting supplies, outfit and men into the reserve, an electric railway would serve the purpose, and, by avoiding heavy grades, etc., could be built for probably \$10,000 per mile, costing half a million dollars, thereby saving to the province over six million dollars, a very tidy sum indeed to develop our great resources. For an electric railway there is abundance of electrical energy available at either the Grand Falls, Squaw Chute or Aubrey Falls, on the Mississauga River, along the route on which the railway can be most cheaply constructed.

The traffic of such a road would not be confined to passengers and supplies alone, but its very existence would develop a traffic equal to any other road, as it is a well-known fact, that Gould Township promises to be, and is believed to be as rich in copper and gold as Sudbury is in copper and nickel, while a vast area of iron claims further up the Mississauga lie waiting development as soon as shipping facilities are available. Add to this the hundreds of millions of hardwood, both in the reserve and in the townships between us and the reserve, into which small mills may go, to convert this hardwood into lumber, and we already have promise of immense development once a railway is built.

In addition to the pine and hardwood, there are other woods, such as spruce, Norway, balsam, and white birch to which the railway will add a market value, and which will also be a loss in the event of the reserve being fire swept.

The policy of the government has been to conserve that great timber wealth for the future needs of the province, and, until recently, this policy was looked upon as wise and sound, but conditions have changed since the storm occurred, and the policy of the government must change too, so far as this timber is concerned. I am told that the Department of Lands, Forests and Mines has called for tenders on some of the blocks of timber in the reserve and the bids have been so ridiculously low they could not be accepted. There can be no other reason for this but the lack of transportation facilities. Let the government announce that a railway will reach the reserve by the fall of 1914 (and this can be accomplished) and with that announcement call for tenders for some of the pine, and I venture to say that the advance in the offers on two or three of the six-mile blocks of pine will be sufficient to build and equip the railway. The lumbermen need the pine. The province needs the money and cannot afford to risk the loss of so many millions of dollars, and this north country needs the railway. If ever there was a time when the Government of this province was justified in building or assisting a railway, the time is now,

and every month's delay will add to the risk of the loss of millions of dollars to this province.—Yours truly, J. B. Dobie.

Shooks for the Yard Trade

There are many opportunities that are missed by the saw mill man when he turns his thoughts to box shooks and crates, simply because he forgets, for the time being, all about the retail dealer in lumber and the jobbing planing mill man in the country towns, says The St. Louis Lumberman. There is really a chance to develop quite a shook trade with the yards and planing mills, some of it in rough lumber and some of it in finished stock.

To begin with, the yard man in the community may be able to develop some shook trade with shippers in his territory. This is a point that has been made before in these columns. Then there is another point: There is a lot of stuff used by builders that might well be cut into specific dimensions which would make it properly shook trade. Such stock as bridging, banisters, shorts in flooring and ceiling, step stuff and risers in single lengths, and a multitude of items of this kind which, by as much effort at study and development as is given to the box and crate trade outside, might be made to yield even better returns herein.

Incidentally, the planing mill man, if he is encouraged to do it, may use short lengths of rough material in the same way.

Take the matter of single lengths in step stuff and risers, for example. The first thing the average mill man will likely raise the point of uncertain length. Yet, he has to confront that same uncertain length in the getting out of longer boards for step stuff, and, often, the lengths will not cut the board to advantage.

Still, a careful study of the work in the community will enable the local dealer to establish certain standard lengths in steps and risers, lengths that are used regularly enough that he may well stock up on them. Once he has established two or three standard lengths, this gives an opportunity to get the stock made up and to utilize short lengths in the making.

Where the planing mill man buys stock in short lengths and makes it up in this way, he can not only run the nosing on one edge of the board, but he can square off and extend the nosing on the ends, and thus have a finished step which he can sell to the builder at the same price he would have to charge for the step stuff with simply a nosing run on one edge—and it would prove a convenience that the average builder would appreciate.

For the yard trade, the millman can put up finished steps and risers himself. Lots of this stock can be worked in short lengths from a lower grade material that he could not ship in full length to the market. And while it will never be possible to take care of the entire trade in this way, it is practical to develop quite a volume of business in small dimensions of various kinds in special stuff, properly shooks.

To accomplish this is more a matter of salesmanship, and of educating the dealers and the public, than anything else. This should not be much of a handicap, because the wide-awake mill man must send his salesmen on the road, and it is no more trouble for him to develop this special dimension stock trade among the yards and planing mills than it is to develop a shook trade among the users of packages.

In truth, it should be easier, because there is less competition. It is virtually new ground; ground that, when properly cultivated, should yield good returns with very little opposition and very little battling over the matter of getting a price that will net some good returns and, at the same time, enable the mill man to clean up a lot of stock that he is in the habit of looking toward the box and crate trade to take care of.

Crown Land Pulp and Paper Will Enter United States Free

That wood pulp and paper made from pulpwood cut on the Crown Lands of Quebec upon which the provincial restrictions were removed is entitled to entry free of duty under Section 2 of the Reciprocity Act was the ruling made recently by Judge Somerville of the Board of United States General Appraisers in the protests made by the Laurentide Paper Company, William A. Bird, the Central Vermont Railway and the Laurentide Company. The attorneys for the Government advanced the contention that the restrictions were removed on the basis of a contractual agreement between the paper mills in Quebec and the Province of Quebec. Louis Armstrong, treasurer of the Laurentide Company, as a witness denied such an agreement had been made, and also that the order-in-council granted on December 31, 1912, prohibited the export of pulp wood and that the release of the Crown Land restrictions was made only on the promise not to export the pulpwood, but to give the province the sole benefit of the use of its natural resources. On the strength of this testimony and statements of a similar nature by other witnesses Judge Somerville sustained the protests of the importers and the collector is ordered to reliquidate the entries.

A Prosperous Bracebridge Industry

How George Tennant Developed a Large Business from Small Start in Face of Many Obstacles



Geo. Tennant, Bracebridge, Ont.

The days when it was possible for a man to go into the business of manufacturing lumber and to make such a profit as to become "a millionaire lumber king" in the space of a few short years, may have passed, in Eastern Canada, as so many lumbermen now declare. On the other hand it is possible to-day, to go into the lumber manufacturing business in a small way and, with energy and ability, work up a successful business with reasonable certainty. The industry in Ontario is, in fact, remarkable for the number of small manufacturing companies which have started out moderately, being content during the early stages with a moderate amount of success, and which a few years later have developed into large industries paying good profits.

An example of this sort of success is found in the case of the business carried on at Bracebridge, Ont., by Mr. George Tennant, a business which started out a few years ago with much to discourage the owner, but which has developed gradually into one of much importance to the town of Bracebridge in which it is located, and promises to become a much more extensive industry in the near future.

A Short But Interesting History

The history of this business is short, but none the less interesting. The sole proprietor and manager is Mr. George Tennant, whose portrait is published herewith and who went to Bracebridge, from Hepworth, in the county of Bruce, nineteen years ago, to work for the firm of Ford & Gillespie. With this firm he had his first experience of sawmilling and occupied the position of head sawyer. This position he held for two years, until the firm dissolved partnership and Mr. Gillespie took over the business. George Tennant had given such satisfactory service to the firm that Mr. Gillespie engaged him to continue, and for two years more he was in charge of the sawing operations, also taking full charge of the mill in summer and the scaling in the woods during the winter. At the end of four years at Bracebridge he found himself with a fine practical knowledge of the work of sawmilling, the management of woods operations and the conducting of the business end, in the way of finding markets for the product. It was only natural that, when Mr. Gillespie became dissatisfied with the business, George Tennant should have been the man to take it over and carry it on successfully. This was the opportunity for which he had been preparing himself for several years. Mr. Gillespie proposed that he should take over the business for himself and, after giving the matter a good deal of thought, he decided to do so.

This was George Tennant's first venture into business on his

own account and the proposition was one which might have made other men hesitate, as the former owner was not pleased with the outlook. George Tennant, however, having decided to take over the business, at once started in to make it a success. To purchase the mill and his first stock of logs, all he had in the way of money was \$200, not much to start with, but just sufficient to indicate to the banks that he was a man who might be expected to make a fair profit, if given a little encouragement in the form of credit. The result was that George Tennant secured credit to the extent of \$4,000, which he invested in logs. Mr. Gillespie, the former owner of the mill, was content to allow him a year in which to make payment for the mill, thus, with a heavy burden for a man whose capital was only \$200, but with a large fund of courage and determination, Mr. Tennant commenced operations on his own account. That he was fully justified in placing confidence in himself and in borrowing the money to finance his undertaking, is illustrated by the fact that in the fall of the same year, after the first season's operations, he found himself the owner of \$5,000, after paying both the bank and Mr. Gillespie; a truly remarkable record. The next year he turned out about the same quantity of stock and met with similar success.

Plant Swept Away by Fire

The business went along in this way for a few years and Mr. Tennant was well on the road towards business success in a larger way, when, in the spring of 1902, after the mill had only been running about two days, fire broke out in the plant about midnight and swept away everything. The loss was \$5,000 and the insurance \$1,800. The blow was a heavy one and Mr. Tennant, for a time, was at a loss what to do. Two alternatives presented themselves; to rebuild the mill, or to sell the logs which he had on hand and go back to work in someone else's employ. He was inclined to take the latter course at first, as he had no timber limits of his own and depended upon the logs he could buy. The quantity of logs available on the river (north branch of the Muskoka) seemed to be getting smaller each year. Mr. Tennant, however, had had sufficient taste of the advantage of being in business for himself to make him lean towards rebuilding the mill. After some consideration, this was the course he adopted. He put up a new mill on the same site. With three other men, he set to work and had the mill up in time to cut out his stock of logs the same fall. The result was that he lost very little in the way of business and was soon back upon his feet once more. During the next year he ran the mill with just about the same success as formerly.

For six years more he operated the mill with equal success, before making any further change. Then there came a time when the Bracebridge Furniture Company went into liquidation and offered their plant for sale. Mr. Tennant felt that he could make a success of this business also, and he bought the plant and moved his sawmill over close to it. This he did in order to save drawing the lumber a distance of about one mile to the railway.

Each year, since moving to the new site, Mr. Tennant has cut from one and one-quarter to two million feet and all of this he has always sold in block to the R. Laidlaw Lumber Company, Toronto, who have purchased his stock for the last twelve years.

Mr. R. A. Oughtred, for several years in the lumber business at Marbleton, P.Q., has opened offices in the Premier Building, Sherbrooke, P.Q., making a specialty of spruce and hemlock timber, hardwood, pine and pulpwood. Mr. F. W. Johnson, who was formerly with the Dudswell Lumber Company, is in charge of the office staff.



George Tennant's Plant at Bracebridge, Ont.



View of Yard—George Tennant's Plant, Bracebridge, Ont.

Timber Production on Dominion Lands

Department of Interior Report Gives Interesting Statistics of Output and Sales of Crown Timber in the Western Canadian Provinces

The annual report of the Department of the Interior for the fiscal year ending March 31st, 1913, contains reports of the Crown timber agencies at Winnipeg, Edmonton, Calgary, Prince Albert, New Westminster, Kamloops and in the Yukon. The timber revenue of the Department for the year amounted to \$434,196.60 and was made up as follows:—Bonus, \$33,272.93; rental, \$73,126.90; royalty, \$154,859.12; permit fees, dues, etc., \$154,487.73; seizures and fines, \$18,449.92.

The revenue derived from timber and grazing lands received at the Crown Timber Agencies, together with the ruling price of lumber, the number of mills operated on berths held under license, and the number of portable sawmills in operation, may be summarized as follows:—

Total Revenue	Average price of Lumber per M ft. B.M. at Mills	No. of mills operating under license	No. of portable mills in operation
\$ cts.	\$ cts.		
Calgary	26,392 55	17 13	19 21
Edmonton	35,980 45	16 67	24 46
Prince Albert	63,693 37	18 29	4 16
Winnipeg	93,457 45	16 83	27 31
New Westminster ...	58,528 30	14 50	11 ..
Kamloops	71,662 08	13 79	7 ..

The returns of operations received show the following quantities of building material as having been manufactured and sold under Government license during the year in the timber agencies above referred to:—

	Manufactured	Sold
Sawn lumber, ft. B.M.	329,469,767	315,917,874
Shingles	49,876,315	49,901,315
Railway ties	342,138	342,138
Laths	48,372,389	51,987,702

The following material was manufactured and sold on permit berths and portable sawmill berths:—

	Manufactured	Sold.
Sawn lumber, ft. B.M.	46,259,635	53,703,666
Railway ties	165,908	165,908

The areas of timber lands held under license and permit in the provinces of Manitoba, Saskatchewan and Alberta, and in the Railway Belt in the province of British Columbia, on March 31, 1913, were as follows:—

	Under License Sq. Miles	Under Permit Sq. Miles
Manitoba	1,303.20	635.01
Alberta	2,167.68	40.73
Saskatchewan	2,107.70	289.74
British Columbia	1,797.80	5.30
Total	7,371.38	970.78

The inspector of Crown Timber offices at Winnipeg reports that at the end of the year the stock of logs on hand cut from Crown Lands in the four western provinces totalled 5,437,902 pieces, each would produce in the neighborhood of 350,000,000 feet of lumber. There were 124 berths under permit in the Winnipeg agency during the year, as compared with 107 during the previous year.

The total sales of lumber in the provinces of Manitoba, Saskatchewan and Alberta during the year, together with figures for the previous year, were as follows:—

	Ft. B.M. 1912-13	Ft. B.M. 1911-12
From British Columbia Mills (Provincial Lands) ..	623,325,362	617,674,621
From Western Ontario (Pine)	130,000,000	150,000,000
From United States (Free)	256,000,000	236,000,000
From United States (Dutiable)	55,000,000	47,000,000
Manufactured at Mills in Manitoba, Saskatchewan and Alberta (Spruce)	241,946,902	156,110,144
In Railway Belt British Columbia—Dominion Lands —(Fir, Cedar and Hemlock)	127,574,638	74,325,379
	1,433,946,902	1,281,110,144

In addition to the lumber shipments from the United States there was imported 72,723,000 lath and 89,287 thousand shingles, while there was exported, going to Chicago, 5,183,000. No. 2 spruce lath, upon which a duty of twenty cents per M. is collected, the American product has free entry into Canada.

The figures given as to quantity of spruce and tamarac lumber sold during the year by mill men operating in the Prairie Provinces can be relied upon as accurate, as they are compiled from their sworn returns. The other figures were secured from official returns and from the two Associations (Wholesale and Retail) representing the lumbermen in the West, and can, I feel, be accepted as being nearly accurate.

I am informed that, as a result of improved conditions in the United States lumber market, very little of the American product is, at present, being shipped to Western Canada. Owing to this fact, prices here have advanced and are higher than for some years past.

It is confidently expected by the British Columbia lumber manufacturers that, with the opening of the Panama Canal, a great impetus will be given to the export trade, and that a profitable market for their products will be found at Atlantic ports in North and South America, and that the export trade to Great Britain and Europe will improve.

The matter of utilizing the waste products at the mills in a profitable manner is receiving the earnest attention of the lumbermen, and experiments are being made with that end in view.

Very little damage was done to standing timber during the year by fire. The rainfall in the West was heavy and came at the danger season.

Manitoba Operations

The report of the Crown Timber Agent at Winnipeg shows that 49 sawmills were operating under government license in his agency during the year, cutting almost entirely spruce and tamarac. Total production was 63,390,156 feet B.M., of which 62,962,952 feet B.M. was sold.

The log production in connection with these mills was 1,056,896 pieces and the stock manufactured amounted to 1,198,097 logs. At the conclusion of the year these companies had on hand, 1,009,064 logs. The lath production of these mills amounted to 17,224,617 pieces and sales amounted to 16,967,750 pieces. The same mills also produced 88,390 railway ties and sold 101,982 railway ties. The shingle production was 50,000 pieces and shingle sales were 75,000 pieces.

The Crown Timber Agent at Edmonton reported receipts for the year amounting to \$135,980.45. There were 48 mills operating under Government license in this agency during the year, which turned out 14,871,777 feet B.M. of lumber and sold 15,046,525 feet B.M. The log production in connection with these mills amounted to 378,267 pieces and the logs manufactured amounted to 250,650 pieces. Logs on hand at the end of the year totalled 256,996 pieces. These mills manufactured 196,663 railway ties and sold 197,481. They also manufactured 3,375,252 lath and sold 3,192,702 lath. Their shingle production was 110,750 pieces, and their sales were the same amount. The average price of lumber per M. feet in connection with these mills was \$16.39. The same mills also manufactured 82,980 feet of piling and sold 16,820 feet.

Operations in the Calgary District

The Crown Timber Agent at Calgary reported that the quantity manufactured from licensed timber berths during the twelve months was 23,602,764 feet B.M. and the quantity sold 21,818,275 feet B.M. Mills under permit in this agency manufactured 4,406,796 feet and sold 6,652,283 feet. The total quantity of lumber on hand at these mills at the end of the year was 15,983,231 feet. In addition to the 28,009,560 feet B.M. manufactured, the report says that probably about 100,000,000 feet was brought into the province from British Columbia and 10,000,000 feet from the United States. The average price of lumber from both licensed and permit berths during the year was \$15.65.

The Crown Timber Agent at Prince Albert reported that the sales of lumber manufactured under license in his agency amounted to 110,271,719 feet B.M., an increase of 62,755,098 over the previous year. The average price of this lumber was \$18.29, a decrease of \$1.16 per M. feet B.M. The quantity of lumber manufactured under license was 121,786,667 feet, an increase of 44,317,072 feet. The quantity on hand at the end of the year was 47,314,398 feet. The cut of logs in connection with these mills was 1,708,039 pieces, whereas 2,143,606 logs were manufactured and these companies had on hand at the end of the year 2,651,326 pieces. The same companies produced 25,658,420 shingles and sold 29,760,200.

In the New Westminster agency the timber production totalled 39,114,801 feet B.M. of saw logs, 13,781 cords of shingle bolts, 82,328 lineal feet of piling and poles, 29,904 pieces of railway ties, 1,000 fence

posts, 1,239 cords of wood. The mills under license in this agency cut 23,695,365 feet B.M. and sold exactly the same quantity.

In the Kamloops agency, mills operating under license manufactured 82,123,038 feet B.M. of lumber from 674,329 logs.

A summary statement of the operations on Dominion timber berths under license for the year ending March 31, 1913, shows the following totals:—

Lumber, manufactured 329,469,767 feet; sold 315,917,874 feet; on hand 95,095,892 feet; lath, manufactured 48,372,389 pieces; sold 51,987,702 pieces; on hand 9,394,972 pieces.

Shingles, manufactured 49,876,315 pieces; sold 49,901,315 pieces; saw logs, cut 4,367,141 pieces; manufactured 4,858,101; on hand 4,943,088.

The timber cut under permit totalled 46,259,635 feet and the sales under this head amounted to 53,703,666 feet.

British Columbia's New Pulp Lease Regulations

The amendment to the forest act of British Columbia, which extends the present facilities for selling timber in small quantities and gives a longer tenure to pulp leases was recently given its second reading in the legislature and Hon. W. R. Ross, Minister of Lands explained the various provisions of the proposed bill. Hon. Mr. Ross remarked that the administrative work of the Department had been organized during the past twelve months for each of the eleven forest districts, and a permanent local staff had been provided for these districts, which had enabled the Department to undertake greatly increased amounts of forest work. A record revenue had been collected in spite of the severe financial stringency. An excellent showing had been made in forest protection last summer. He had no amendment to propose in connection with the protection section of the act. The tax of one cent and a half per acre for the protection fund had proved sufficient. During the year, nearly \$100,000 had been devoted to the construction of permanent improvements and there was a handsome surplus on hand for the work of the present year.

An amendment was now proposed, he said, to simplify the provision for small timber sales. This amendment would permit of sales being carried out without the delays consequent upon correspondence with Victoria. Whenever possible, it was proposed to substitute small timber sales for the out-of-date procedure of issuing hand-logger licenses. Small sales would give the enterprising hand-logger, whose license at present forbids the use of steam machinery, an opportunity to work up in the business.

Speaking of the proposed amendments to pulp leases, Hon. Mr. Ross said that British Columbia's vast areas of pulpwood timber and her abundance of water power offered remarkable opportunities. So far, however, her share in the pulp industry had been very small. The pulp industry was one which utilized timber that would otherwise go to waste under the destructive methods of present day lumbering. Moreover it was an industry which employed white labor and created new settlements. He believed that it was reasonable, therefore, to extend the existing pulp leases so as to provide definite tenure for a period of time, sufficient to justify the heavy investment of capital involved in the erection of modern paper mills. He believed that the co-operation of the government in making possible the extension of the leases would bring into the province in the next few years many millions of dollars of additional capital and that the industry would soon be firmly established.

Pulp and Paper Association's Annual Meeting

Questions affecting tariff classifications, trade customs and methods, and statistics of production were discussed at the annual meeting of the Canadian Pulp and Paper Association, held in Montreal on February 26th. Mr. Carl Riordon presided. A paper on the classification of paper for customs purposes was read by J. R. K. Bristol, while Mr. E. S. McPhail discussed "The Value of Statistics." After Mr. Howard Smith had read a paper on trade customs, a motion was passed asking the executive to draft trade customs for the trade as a whole. The question of the proposed new carload minimum was considered, but no action taken.

Plans were proposed with a view to increasing the membership of the association. For the ensuing year the following will hold office: President, Mr. Carl Riordon, Montreal (second term); vice-president, T. H. Weldon, Toronto; executive committee—Mr. C. Howard Smith (Montreal), F. H. Gage (Toronto), G. M. McKee (Quebec), F. H. Ritchie (Toronto), T. J. Stevenson (Montreal), K. L. Warren (Riviere du Loup), H. Crabtree (Crabtree Mille).

In the evening the members dined at the Windsor Hotel, Col. Hugh Clark, M.P., being the chief speaker.

It is proposed by the Newfoundland Government to impose a royalty of one dollar per 1,000 feet of lumber cut by small mills, which at present contribute nothing to the revenue. This is estimated to bring in \$25,000.

Air Seasoning of Timber

Proper seasoning of timber is conceded to have an important bearing on the strength and durability of the timber, whether or not it is subsequently treated. Data as to the right length of time for air seasoning have been assembled by Mr. William H. Kempfer of the Forest Products Laboratory at Madison, Wis., who presents the results of records kept on many lots of timber of different kinds, cut in various localities and seasons. From the tables and curves given, Mr. Kempfer draws conclusions which are abstracted below.

The accelerating effect of warm, dry weather on the rate of evaporation and the retarding effect of cold or wet weather were seen very plainly in those seasoning tests which were started at different times of the year, and also in tests where the weighings were continued from one summer through the winter into the succeeding summer. Timbers which had become fairly dry ceased to lose moisture, or even gained weight, during the wet or cold, damp weather; but timbers cut in the unfavorable periods showed a moisture loss during subsequent unfavorable weather, and by the time of the warm, dry weather they had so far seasoned that the rate of loss was fairly constant throughout both periods.

The effect of climatic variations in the different places where the tests were made was less, on the whole, than the effect of the changes in a given locality throughout the year. Each locality had its favorable and its unfavorable periods. Although direct comparisons of climatic effects cannot be made because different species were studied in the different localities, the effect of hot, dry and long summers is marked.

By considering the effect of time of year on rate of seasoning, timber may be cut at such time as to obtain either slow or rapid drying. When timber is cut in one part of the country to use in another part, climatic conditions should also be taken into account. Thus in the case of a timber-treating plant drawing supplies from different parts of the country, it would be worth while to consider whether the timber should be held for seasoning at the plant or in the locality where cut.

Species and Form

Variations in the rate of seasoning among species may be due to differences either in moisture content or in permeability of the wood. Of two pieces of wood differing in moisture content, other conditions being equal, the one with the more moisture will dry the more rapidly, and in a comparatively short time both pieces will reach about the same condition. This rule does not apply strictly between different species, but with conifers the usual variation between the species does not seem sufficient to necessitate separate treatment.

Sapwood of the conifers contains, as a rule, much more moisture than does the heartwood, and a difference in the proportion of heartwood and sapwood in two timbers of the same species accounts for a large part of the difference in moisture content. But sapwood loses moisture more rapidly than the heartwood, and this tends to equalize the time required for the two pieces to become air dry. Furthermore, so far as the data presented afford a basis for comparison, ties of different coniferous species, all seasoned under the same conditions, usually differ much less in time required to become air dry than in amount of moisture lost.

The size of the piece influences the time required for seasoning, because it affects the relation of the volume of a timber to its surface area and the distance which the moisture on the interior must traverse to escape from the surface. This influence, however, is not as great as might be expected. Shortleaf pine in 5 x 8-in. beams contained only three per cent. less moisture after fifteen months' seasoning than those 8 x 12-in.; 7 x 9-in. redwood timbers contained three per cent. less after three years than those 8 x 16 in., and the 3 x 14-in. size contained three per cent. less than the 7 x 9-in.

Manner of Exposure

The extent to which timber is exposed to atmospheric influence has an important bearing on the evaporation of moisture from its surface. The exposure is affected chiefly by the manner of piling the timber. If weather conditions are favorable isolated piles permit rapid seasoning, however closely the ties are stacked, but if the piles themselves are crowded together the influence of the form of pile undoubtedly becomes more pronounced.

The combined effect on the rate of seasoning of close piling of ties and retention of their bark is indicated by tests made on hemlock. Ties that had been piled solidly with the bark on weighed 40 lb. per cubic foot at the end of one year. The average weight of peeled hemlock ties in various isolated piles seasoned for one year ranged from 36 to 38 lb. per cubic foot and was usually less than 37 lb.

Attempts to determine the effect of the position of piles with regard to wind direction showed negligible results.

Site has an important effect on seasoning. Chestnut poles in Maryland which were fully exposed to sun and wind lost 25 lb. per pole more in ten months than others partly protected by a hill and surrounding trees; and poles skidded over dry ground lost 35 lb.

more per pole in eight months than others skidded over ground which was wet and covered with rank vegetation.

In tests to determine whether seasoning of timber may be facilitated by soaking it in water, it was found that timbers which had been soaked for short periods, upon removal from the water, lost the extra moisture so fast that they soon reached practically the same condition as similar timbers not immersed. Whether the soaked timber ultimately reached a lower moisture content is still open to question.

Deterioration While Seasoning

Complaint is often made that timbers of certain species, such as the soft pines, the gums, beech and maple, will decay before they will season. It is believed that this can be prevented usually by piling the timbers so as to dry rapidly. The tree should be barked as soon as felled, and the timbers piled openly. Injury by insects may be prevented in the same manner.

While quick seasoning prevents injury by decay and insects, it is not always necessary nor desirable. Timber cut and set drying in hot weather checks more seriously than in cold weather, and sometimes becomes "case-hardened" and very resistant to preservative treatment. Timber cut in the late autumn or winter seasons more slowly and evenly; if peeled and properly stacked, or skidded off the ground, it dries enough before warm weather to resist attack by insects or fungi. But whatever the time of cutting, careful attention is needed in piling the timber, either more openly or more closely, according as local climatic and other conditions are found to require.

It is frequently stated that wood cut during the winter when the "sap is down" is of better quality or more durable than that cut when the "sap is up." These effects must be attributed very largely to external conditions rather than to internal conditions of the tree before it is felled. Moreover, contrary to popular belief, a tree contains as much sap in winter as it does in summer.

Degree of Dryness Attainable

The term "air dry" has heretofore been used as a matter of convenience to indicate the lowest moisture condition reached by the various timbers. In most cases, further losses would have occurred if the tests had been continued. Such losses, however, especially with large timbers, are so gradual after the greater portion of the moisture has been evaporated that it is impossible to fix any particular moisture per cent. to be designated "air dry."

The drying of wood is accompanied by a shrinkage of its volume which begins usually when all water has been evaporated from the cell cavities, and the cell walls themselves begin to dry out. When this condition is reached, the moisture content is, as a rule, less than 30 per cent. The moisture content in a large stick is not evenly distributed, however, and the outer portions dry first, so that some shrinkage occurs almost as soon as seasoning begins. Partial air seasoning has very little effect in preventing the subsequent shrinkage of timbers, and complete air seasoning is not sufficient if the wood is later to be subjected to further drying, as by use in artificially heated structures. Shrinkage is nearly twice as great tangentially as radially. Longitudinal shrinkage is so small that it may be disregarded.

Cost Accounting in the Sawmill

Determining the cost of production of a given grade of lumber is a problem which most sawmill men have given up in disgust. As a matter of fact, it is an impossible proposition although in practice it must be treated, for purposes of bookkeeping if for no other reason, says the Hardwood Record. Though the method used be arbitrary, there is need for hitting upon one which will coincide with the facts as closely as possible.

There can be little doubt that there are many errors in keeping track of sawmill expenses and the cost of production of lumber. In fact, a large concern which operates a sawmill and appears to be fairly prosperous admits that its books show a loss of something like \$7,500 a year on its manufacturing operations, and that this is made up for only in the sales department. The figures are gotten by fixing a scale of prices, adopted several years ago, upon the output of the mill and comparing the total valuation of the lumber, appraised in this way, with the cost of production.

The fact that the concern can overcome this sizable sawmill loss after the lumber reaches the yard suggests that the scale of values used in appraising the product of the mill may be out of line. And yet the company believes that the figures are close enough to the market to warrant their use. If this is correct the mill is losing enough money to make investigation of its operations mandatory, although it is conceded to be well managed and to be operated efficiently.

Getting back to first principles, it is obvious that the actual cost of production of one grade of lumber is the same as that of another. Thus the only absolutely correct basis upon which to figure cost is

with reference to the log-run production. When it has been determined what the cost of manufacturing the lumber, log-run, is, a relation must be established between the values of the various grades to enable the sums of those values to equal the log-run total.

In other words, as a theoretical proposition, the millman must value his firsts and seconds, No. 1 common and No. 2 common lumber in such a way that when his production of those grades is figured at the end of a given period, their total will equal the cost of operating the mill. They will be a correct analysis of the cost of production, although, as stated, it can be only theoretical, and its correctness must depend upon the accuracy of the operator in fixing his arbitraries. These should be somewhere between the actual cost of production, on the one hand, and the market value, on the other, since to go outside of this range will immediately introduce error. However, if the arbitraries used are consistent, and the cost of production is greater than the value of the lumber thus turned out, there is evidently something wrong in the mill.

Another question which must be considered in connection with production costs is the value of the logs which are used. If the log buyer is successful in getting the timber at a good price, the profit shown by the transaction after the logs are delivered and graded should be credited to the log department and not to the mill; and on the other hand, a poor lot of logs should go into the mill at their actual value, even though a higher price was paid for them. Thus if a lot of logs is bought for a lump sum, they should be valued before being manufactured as a means of preventing either the skill of the buyer or his failure to secure good material from entering into the apparent results of the operation of the mill.

The production of given lots of logs should be determined, instead of manufacturing without knowledge as to the origin of the logs or attempting to check up the results of a given lot. There is a wide variation between the results of different days' work, some sawmill owners finding that it varies from as much as \$150 loss to a profit of that amount. It is likely that the large amount of the variation depends entirely on the variation in the character of the timber, since the varying efficiency of labor is not likely to make as much difference as that.

Since there is so great a difference in the kinds of timber, it seems to be desirable, if not necessary, to number logs and get a close tab on the results of manufacturing them. Thus if the output of a given lot turns out to be deficient, there will be a guide as to purchases to be made in that section in the future, while the same consideration applies to unusually good results. Certainly good and bad should not be mingled indiscriminately, the mill-owner thus depriving himself of the knowledge which may explain a good day's run or suggest the reason for a bad one.

A rather effective method of keeping a check on the sawmill is to pay it for manufacturing the same rate which is paid custom sawmills. It is assumed that the custom mills are making money, since they would otherwise not work for the price charged, and the mill of the owner is compelled to produce on that basis, and make a profit, or an investigation is undertaken for the purpose of finding out the reason why. This saves the necessity for much analysis, since no reference is made to the value of the lumber produced. The only requirement is that the gross income from the log-run production shall be sufficient to show a profit on the investment, depreciation and maintenance expense, plus the cost of operating the mill. If that is done, the result is satisfactory. If not, the inevitable leak in the mill is looked for.

It is conceivable that a mill might make a good showing in this way when it would fail to show a profit where the value of the lumber produced was figured against the cost of the timber and the expenses of operating the mill. In fact, the method has so many advantages that, as a solution of the problem of handling the cost of production, it is to be recommended, especially for the concern which does not desire to increase the amount of clerical work which is necessary for the operation of anything like a real system for determining this factor.

If one were able to figure averages based on say ten years' experience and the production of hundreds of hardwood mills, it might be possible to determine the proportion upon which to base the arbitrary values given various grades. That is to say, if the actual results of manufacture were shown, a sufficient quantity being figured to eliminate unusual cases, it could be told with fair accuracy how much of each grade a given quantity of logs ought to produce. Knowing the proportions of each, and the market value of each grade, the percentage of the total value of the log-run production to which each grade is entitled might be determined.

Establishing proportions of this kind would be difficult, however, particularly as the character of timber manufactured is gradually becoming poorer, so that the proportion of upper grade lumber is becoming smaller and low-grade stock larger. But at the same time it would be a valuable aid in determining intrinsic values, compared with the present method, which consists of using market values as a base instead of the values established by the cost of production.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-tf

Wanted

500,000 feet 1-in., 1½-in. Soft Elm.
700,000 feet 1-in. Basswood, Ash and Birch.
For delivery as soon as dry this year. State what you can supply and lowest prices on cars.
Box 945, Canada Lumberman, Toronto. 3-8

Wanted

Several cuts of Good Maple and Beech to be sawed during Winter and Spring of 1914 in District between Georgian Bay and Toronto, also stocks of Birch from Muskoka District. Box 964, Canada Lumberman, Toronto. 4-7

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department"

Wanted to Buy

500,000 ft. log run, sawn Hard Maple, various thicknesses, M. C. out. Must grade proper percentage 1 and 2 and No. 1 Common and not to exceed 20 per cent. No. 2. Will pay cash when loaded on cars; or will buy good Maple logs in the round, 12-in. and up diameter.
Write P. O. Box No. 1595, Montreal, giving best price and rate of freight to Montreal. 2-tf.

Wanted to Buy

4/4 White Basswood.
4/4 12-in. and over wide Soft Elm.
Round Rock Elm Logs 12-in. and up diameter, 20 to 35 ft. long—admit 10 per cent. good white gray elm. Any station in Canada. Also square Rock Elm timber.
Highest prices. Spot cash.

HALL BROS.,
Manufacturers and Wholesalers.
Toronto and Marmora.

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

1 x 1 x 42.
1 x 1 x 48.
1 x 1½ x 42.
1 x 1½ x 48.
1 x 1¾ x 42.
1 x 1¾ x 48.

Require Thickness, 1/16-in. Plump.

Quality—Free from all defects.

Can take delivery of green or dry stock.

Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc. 24-1-TF

Wanted to Buy

One million feet 1-in. Dead Cull Pine, also fifty thousand feet 1-in. Cull Spruce or Hemlock. Apply

M. BRENNEN & SONS,
Hamilton, Ont. 6-9

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft. P. O. Box 392, Ottawa, Ont. 3-tf.

For Sale

Five hundred cords of Pulpwood ready to ship.

BOIS GILBERT MFG. CO.,
Co. Dorchester, P.Q. 6

For Sale

Cut of Hemlock near Ottawa. Will manufacture to suit buyer.

HALL BROS.,
Manufacturers and Wholesale Lumber Merchants
Marmora and Toronto. 4-7

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que. c

For Sale

Cut of 100,000 ft. Pine and 50,000 ft. Spruce near Ottawa. Will cut in dimensions to suit purchaser.

A. T. SHAVER & SON,
Lunenburg, Ont. 6

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,
Janesville, Wisconsin. 1-tf.

Wanted-Machinery

Wanted

Two or three dump wagons in good repair, suitable for handling mill slabs. State condition and lowest cash price.

BOOTH & SHANNON,
Biscotasing, Ont. 6-7

For Sale-Machinery

A Bargain

44-inch Wick Gang for sale at a bargain. In first class shape. Apply,

Fraser Lumber Company, Ltd.,
Plaster Rock, N.B. 2-7

For Sale

Thirty Standard Gauge Flat Cars in good condition; will pass M. C. B. inspection; 30 ton capacity, equipped with air brakes.

JOHN J. GARTSHORE,
Toronto, Ont. 5-8

Band Mill For Sale

Waterous double cutting pony, practically new and in good running order. Also filing outfit and saws.

DEVON LUMBER CO., LTD.,
Ottawa, Ont. 6

Mill Machinery For Sale

Complete saw mill plant for sale including two single cutting band mills, gang, and all equipment in first class working order. For particulars apply to the Dickson Company, Peterboro, Ont. 5-8

Straight Moulder For Sale

One 8-in. Goldie-McCulloch Straight Moulder and Matcher in perfect running condition. This machine is better than new, as the bearings and all the working parts have been tried and kept in good working order. The owner is replacing with a much larger machine. Price low.

J. RODERICK & SON,
St. John, N.B. 5-6

Woodworking Machinery:—1 No. 1 Balantine power feed dowel machine; 1 16-in. Ideal wood lathe; 1 Hespeler improved power mortiser; 2 24-in. Ideal planers, matchers and moulders; 2 No. 619 Corporation dimension saw tables; 1 42-in. Fay power feed band rip saw; 1 36-in. Egan double drum sander.

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Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

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Large American manufacturer of veneers and thin lumber wants a representative to travel Ontario and Quebec on a commission basis. Exclusive territory. Apply Box 978, Canada Lumberman, Toronto. 6-7

Men for Sawmill Wanted—Engineer, fireman, sawyer, jacker, setters, tail sawyer, lath contractor, pilers and others for Band Saw Mill at Kearney, Ontario, for summer season. Cut is pine. State age, habits and firms previously employed with. None but men experienced in Saw Mills need apply. Apply J. J. Armstrong, Biscotasing, Ontario. 5-6

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Sawmill in good timbered district, about 50 h.p., all complete. It cost \$6,000. To close estate will sell for \$1,500. Address Box 977, Canada Lumberman, Toronto. 6-7

Wanted

party with from \$25,000 to \$100,000 cash to join the advertiser in the manufacture of a valuable timber property where the opportunities for making large profits are exceptional. Address Box 968, Canada Lumberman, Toronto. 5-6

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-tf.

If You Have a Son

whom you want to start in business, write stating the amount you are prepared to invest, his age, experience and capacity. This is an exceptional opportunity for the training and development of a young man, where the climatic conditions are perfect and the business opportunities unlimited. Address Box 969, Canada Lumberman, Toronto. 5-6

For Sale—Retail Lumber Yard and

Planing mill, \$5,000. Stock at invoice prices. Last year's business \$25,800. Natural gas power. Railway siding. 400 ft. metal sheds, etc. Caledonia Milling Co., Ltd., Caledonia, Ontario. 6-9

Saw Mill For Sale

Fully equipped sawmill, including Boiler, Engine, Trimmers, Belts, etc. Everything in running order. Capacity 18,000 to 20,000 ft. per day. Located on T. & N. O. Railway. Apply Box 984, Canada Lumberman, Toronto. 6-7

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. 11

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Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

ESTEVAN, SASKATCHEWAN

Splendid opening for Planing Mill. Lumber Yard could be run in conjunction with advantage. 5,000 population; with large district to serve; cheap power, fuel, light, etc.; city growing rapidly, first-class business assured. Write immediately to the Secretary, Board of Trade, Estevan, Sask., Canada. 4-8

For Sale

Fir and Spruce Timber Limits in the vicinity of Fort George. Price right and terms liberal. Will be sold in quantities as agreed upon up to 45 square miles. Timber not excellent in British Columbia.

If interested apply for further information to

D. J. McEACHERN,

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British Columbia**Saw Mill and Timber Limit For Sale**

A 25-thousand feet capacity Saw Mill, and 90 million feet first class Spruce, Red Cedar, Hemlock and Yellow Cedar, etc., under B.C. Special License. At good shipping point near Prince Rupert, B.C. Inspection invited. A. Cuthbert, P. O. Box 456, Prince Rupert, B.C. 6-11

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Miscellaneous**Coal and Timber**

Will purchase in large tracts only, either in Canada or the United States. We are principals and only deal with owners. No agents or options. Address "Cash," c/o Canada Lumberman, Toronto. 4-7

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 6-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company, 22-t.f. Brantford, Canada.

Processes for Fireproofing Wood

Considerable attention has been given in the United Kingdom to the best method for fireproofing wood, especially in connection with railroad construction. The following is a description of a process which, it is claimed, has received the favorable consideration of the British Admiralty.

The wood is placed in large cylinders, the doors of which are hermetically sealed. The wood is then subjected to a course of steaming, and under vacuum the air and moisture in the pores of the wood are removed and the sap vaporized. The fireproofing solution is thereafter run into the cylinders, and under pressure forced throughout the pores and fibers. Subsequently the water in the solution is evaporated in drying kilns, and the chemicals, in minute crystal form, are left embedded in the wood. When heat is applied, these crystals expand to many times their original size, forming a glassy coating to the fibers of the wood which excludes the oxygen in the air. In time the heat causes the crystals to collapse, but further crystals in the wood immediately expand, and the same process of resistance against fire continues. The chemicals used are antiseptic and preservative, consisting chiefly of phosphate of ammonia. As a result of the treatment, the life of the wood is also lengthened for the cause of decay (sap water) is eliminated. This process is claimed to be especially satisfactory, inasmuch as the material treated is not saturated with a solution of salt, nor are such chemicals used as tungstate of soda, sulphate of ammonia, sulphate of alumina, alum, etc., which invariably cause discoloration of the wood, corrosion of metals, destruction of fibers, and prevent satisfactory painting or polishing. After this treatment the wood can be worked, nailed, glued, painted, polished, etc., as though it had not been subjected to any special process. All kinds of timber can be treated.

The first railway company to take advantage of this process was the Underground Electric Railways of London, and at the present time it is stated that the woodwork of all the cars of the company has been subjected to the treatment. It is also stated that after exhaustive tests the British Admiralty has adopted the process, that the company is engaged in fireproofing large quantities of wood for 70 motor boats for the British warship Indomitable and Monarch, and that the two new super-dreadnoughts now building, the Queen Elizabeth and Warspite, are to have their woodwork fireproofed by this process.

The company using the process states that as a result of the re-

cent disaster at Aisgill, the Midland Railway (on whose system the accident occurred) has requested the fireproofing company to submit a tender for erecting a fireproofing plant at the company's works in Derby.

There is another fireproofing process known as the "Snowdom process," the chief feature of which is a chemical mixture, but the formula is not disclosed. By the use of this mixture it is claimed that woodwork and all manner of fabrics may be rendered non-inflammable and insect proof. In the case of wood already in position, it may be painted or washed with three or more coats, according to density, when the solution penetrates to a depth of about one-eighth of an inch. When treated prior to construction, the wood is usually soaked in the solution in tanks, but if it is desired to render the wood fireproof throughout, pressure cylinders are used to force the liquid into every fiber.—Consul General John L. Griffiths, London, England.

Tamarack Commercially Extinct

"The large larch sawfly," says the Dominion Entomologist, "has destroyed between fifty and one hundred per cent. of the native larch, or tamarack." Every farmer in Eastern Canada has observed this mysterious killing off of the tamarack in the low-lying portions of his woodlot. Mr. J. B. Tyrrell, who recently explored the new District of Patricia for the Ontario Government, reports on the large numbers of the tamarack in that region, but says, "Unfortunately most of the trees are dead." Through the continued attacks of a single forest pest, whose ravages it is now impossible to control, one of the most valuable timber trees of Eastern Canada is now in danger of extinction.

In British Columbia, forest insects have destroyed in some places over twenty-five per cent. of the timber crop. Technical foresters in the employ of the Dominion Forestry Branch have noted similar depredations, when conducting forest surveys in the Northwest. Similar conditions prevail in the United States, where on some of the National Forests the damage done by insects last summer far exceeded that done by fire. H. S. Graves, Chief Forester of the United States, says: "A few isolated trees attacked by insects may form the nucleus of a devastation quite as serious as that from forest fire."

It is very likely that in Canada as much damage is done to the standing timber by forest pests as by forest fires. Fortunately the former are largely dependent for their existence on the latter, for fire furnishes the chief feeding and breeding grounds to the in-

sect foes of the forest. Thus the Dominion Forestry Branch, by reducing the fire-burnt area on Dominion forest reserves last summer to less than two one-hundredths of one per cent. (0.02 per cent.) has succeeded in "killing two birds with the one stone." One of the foresters, describing how this is accomplished, says:—"Fire minimizes the vitality of the tree and climate takes advantage of the weakness, thereby creating a condition favorable to insects and fungi. By minimizing the damage done by fire and handling the various stands according to one of the silvicultural systems suitable to that type the result can only be strong, vigorous trees better equipped to withstand all natural enemies."

Briquetting Sawmill Waste

Many attempts have been made in the past to produce a practical fuel from sawmill waste. According to the report of Mr. R. S. Hamilton, of Vancouver, B.C., a briquetted form of wood waste, is now being produced which is held together by a piece of hemp rope running through the centre. The fuel can be manufactured at \$3 a ton and many advantages are claimed for it. According to tests which have been made, these briquettes, produced from mill waste, contain 8,614 B.T.U. to the pound and produce practically no ash in burning. The method of manufacturing is as follows: The refuse, including bark, slabs, sawdust, shavings, etc., is passed through a hog or edging cutter, where it is cut into pieces about three quarters of an inch long. This material passes to a shredder where it is shredded into fine particles about the thickness of a match and from that up to about a quarter of an inch. From the shredder it passes to a dry kiln. Drying is necessary because green fuel will not stay in shape. The bond is a jute string about sevenply tarred. A plant is now being erected on the property of the Cameron Lumber Company, at Victoria, B.C.



Montreal Engineering Co., Limited,
164 St. James Street,
Montreal.

**Timber limits examined,
cruised and surveyed.
Waterpowers developed.
Pulp and Paper Mills de-
signed and constructed.
Projects financed.**

Review of Current Trade Conditions

Ontario

No important movement, one way or the other, has been shown by the lumber trade in Ontario during the past few weeks. There appears to be no more demand than there was a fortnight ago, although there is a little more enquiry. The volume of sales, however, shows no noticeable increase. There is quite a unanimous opinion, on the other hand, that trade conditions will be fair this spring. The building situation, easier money and the general attitude of the banks toward industry and trade all point in the direction of considerable improvement. There is no apparent shortage of good lumber stocks although they are not quite as plentiful as they were a year ago. Hemlock is about stationary and stocks are not large. The same thing applies to spruce and there is no change in prices. Lath are scarce, No. 1 particularly. Shingles are about steady and the demand is moderate, as is to be expected at this time of year. Retail yards throughout the province are still carrying light stocks which will require immediate replenishing, as soon as the building activity commences.

Sales of 1914 cuts are reported from Ottawa, at prices showing a slight advance over last year. Most of the sales have been for mill and dead culls in spruce and red pine. Middle grades and white pine continue firm. The sales, so far, have been to Montreal, Ottawa and Toronto firms. Sales to the United States are still rare. Local trade at Ottawa is quiet.

Eastern Canada

None of the St. John mills have started sawing yet, and trade continues quiet. The end of March, however, will probably see a start made at one of the mills and others will start early in April. The remainder will wait for the melting of the ice at South Bay, probably about the middle of April. English deal prices show no change, but freights are lower. A reduction is reported in stocks at Liverpool and Manchester, but they are still heavy. Stocks of deals at St. John are rapidly declining and mill yards are practically out of low grade lumber. The demand for building material is very light and factories report very little new work coming to hand. The market for future delivery to the United States is very quiet. Two-inch stock remains at a base price of about \$25 delivered New England points. Lath for 1914 delivery have sold at \$2.85 on the wharves at St. John. Most of the mills, however, are holding for \$3.00. There is a good demand for shingles, but stocks are nearly cleaned up. New stock will not be ready till midsummer. Box shooks are in slow demand. The cut of logs appears to be about normal, but prices are very high.

Better times are expected by eastern spruce firms at Boston in the near future. Most of the dimension business of late has been on a \$24 flat Boston rate. Prices for random are fairly steady. The best sellers have been 2 x 3 and 2 x 4 and there has been little demand for 2 x 10 and 2 x 12. Carload lots of 2 x 4 have been selling at \$22, and 2 x 3 at \$21. For small lots shipped in with frame, 50c a thousand better has been obtained. The quotation for 2 x 5, 2 x 6 and 2 x 7 is \$20 to \$21; 2 x 8, \$22.50 to \$23; 2 x 10, \$24 and 2 x 12, \$24.50. The bottom price for 9 in. frames has been \$25; 10 in. \$26 and 11 or 12 in. \$27. Transactions in random spruce covering boards have been scarce, the top price being \$22.50, some sales being put through at \$22. Prices for No. 2 matched spruce are unchanged at \$24.50 to \$25 and the demand is light. The demand for hardwoods, with the exception of plain oak, is poor. Stocks of hemlock boards in the east are reported light, and manufacturers are asking \$24, although actual selling prices are nearer \$23. It is expected that the renewal of the building activity will strengthen this market, on account of the light stocks.

United States

The activity in general trade conditions which developed during the month of January in the United States did not hold its volume to the end of February and reports at the close of last month indicate that business in general was on a basis rather similar to that of last fall. Steel and iron buying fell off, although this was predicted in January. On the other hand prices of pig iron showed an upward tendency early in March, the first time in five months. Lumber trade conditions, however, continue fairly favorable, in spite of severe snow storms and cold weather, which have reduced the quantity of traffic. Most of the business at present is on a basis of current requirements, but the approach of spring brings indications of a widening in trade channels. Most of the dealers continue cautious, but in many of the large interior cities building permits are increasing and give promise of an extensive demand for lumber. This should have a good effect upon the market, especially for southern pine. There is a fair amount

of buying in progress on behalf of the manufacturing industries. The yellow pine business during January was heavier than during that month in the preceding two years. Prices are reported to be from 50c to \$1.50 higher on dimension and a few other items. Altogether, southern pine is doing better than for several months. Conditions on the Pacific Coast show very little change. There are a few more orders than formerly, but they have only kept pace with the restricted output.

Stocks of northern pine in retail yards are reported to be low, although very little buying is in progress. The arrival of spring is expected to force the yards into the market in a rather extensive manner. Winter logging in Northern Michigan and Minnesota has been very active, although a considerable shortage in the input is expected. Enquiries from eastern buyers indicate that manufacturers will be cleaned up on their lower grades at an early date. The demand for hemlock in Wisconsin and Michigan and at lake markets is heavier. Most of the northern mills have badly depleted stocks and some are asking an advance on nearly all items. The supply of hemlock boards in the east is light, but the demand is small and prices are unchanged. The demand for eastern spruce is light and reports indicate that manufacturers are allowing stocks to accumulate in the expectation of a better demand a little later on.

Hardwood markets are reported very active. A growing movement is noticeable in the leading kinds of southern and northern hardwoods. Consumers, however, are still buying cautiously and avoiding accumulations. More attention than usual has been given to oak, plain red leading the list. Prices are firm. Plain quartered oak has also improved. There is a steady demand for ash at good prices. Birch, maple and elm are all selling well.

Great Britain

Little change is reported in the London spot market during the last fortnight. Spot stock is leaving the docks at a fair rate and the various London trades are using a good quantity. Forward buying is still in progress, but is confined chiefly to covering actual sales, especially in Russian stocks. The deliveries at London docks for the week ending February 22nd amounted to 3,467 standards, as compared with 4,014 standards during the corresponding week of 1913. At Churchill and Sim's recent auction sale, 3 x 9 in. third Quebec pine brought £14 and £13 15s. 3 x 9 in. second Quebec regulars sold at £12 and 10 and 11 in. at £11 10s., with Montreal at £11 5s., thirds at £10 15s. and third Quebec regulars £11 5s.; 3 x 8 and 7 in. third Quebec regulars brought £10 and £9 10s. Prime unsorted British Columbian pine 6 x 16 was sold at £13 10s. to £12 10s., 6 x 12 brought £14 5s. to £13 15s., 5 in. £15 to £14 15s., 4 in., 5s. less.

Spruce deal c.i.f. transactions at Liverpool are still confined to liner parcels sent on consignment, and no change in prices is reported during the past three or four weeks. It is reported that one or two cargoes have already been placed, but prices have not yet been mentioned. Spot prices continue firm and are likely to remain so until the season opens, as present imports are not quite keeping pace with the consumption. Importations of spruce deals from St. John and Halifax continue light, as shippers are apparently holding off until conditions are more definite. Canadian pine deals, boards and sidings are quiet. Very little trade in birch for future shipment is reported from Liverpool. Spot values are quite steady and the demand is fair. There is a fair enquiry for fresh logs from St. John and Halifax, and there would probably be a ready sale, at a reasonable figure, for a parcel of good St. John planks, stocks of which are gradually being reduced at Liverpool.

The improvement recently reported in the trade at Glasgow still continues, both in regard to consumption and enquiry. A moderate business is in progress in spruce, from stocks, at steady prices. There is a good request for 9 in. up x 3 in. and the stock is now very low.

Car Companies Expecting Improvement

One of the largest car manufacturing companies in Canada, in a letter to the Canada Lumberman, under date of March 9th, referring to a proposed article describing the company's operations, says that such an article "would very likely be more interesting when the car companies are busy on freight car work and using large quantities of native woods, which I trust will be the condition before very long."

Canada has 23 million acres in timber reserves, as compared with 187 million acres in the national forests of the United States.

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

BEAR IN MIND

That we saw all winter and always have large stocks of

Norway and White
== Pine Lumber ==

Large timbers cut to order, any length up to 60 feet, from Pine and B.C. Fir.

Headquarters for Norway Silo Stock.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

Ottawa Stocks Selling at Slight Advance

Ottawa, March 9th (Special to the Canada Lumberman): Within the past two weeks, several local lumber firms have made large sales of this year's cut at prices from 5 to 8 per cent. in advance over last year. The stock sold includes for the most part, mill culls, dead culls, spruce and red pine. Middle grades and white pine still hold firm, but considerable movement is expected in these later in the summer. Most of the purchasers have been Montreal, Ottawa and Toronto dealers. Few have been from the United States.

Locally trade is quiet, but it will not be long this way with spring approaching. There have been no changes in manufacturers' prices this month. Conditions in the woods are exceptionally good just now. Full crews are working in all the camps and indications are that they will not break up until the last week in March or the first week in April. Indications are that the cut this year will be considerably greater than it was last year.

The new Parliamentary Committee on Forests and Waterpowers held its first meeting in the House of Commons last week. The committee is formed to gather information on all matters pertaining to forest protection, reforestation, conservation of waterpowers, etc., and to gather this information it has been decided to call in a number of experts, among whom will be: James White, Deputy Minister of the Conservation Commission; R. H. Campbell, superintendent of the Forestry Branch of the Department of the Interior; Sir Richard McBride, Premier of British Columbia, who will be in Ottawa in two weeks' time, and others.

The election of Mr. Gordon C. Edwards, of Ottawa, to the Presidency of the National Wholesale Lumber Dealers' Association, at the convention in Buffalo last week, has brought him many congratulations from his friends. Mr. Edwards, who is general manager of the W. C. Edwards Lumber Company, is the first Canadian to be given this honor.

St. John Market Still Inactive

Fredericton, N.B., March 5th; (Special to the Canada Lumberman):—The market at St. John is still inactive as far as manufacturing is concerned. None of the mills have yet started up, but it is said that Messrs. Randolph and Baker will begin sawing on or about the 20th of this month. The Stetson Cutler & Company, Pleasant Point mill will begin operations on or about April 1st. The rest of the mills will begin to saw on or about the middle of April or just as soon as the ice melts in the booms at South Bay, which usually opens on or about that date. About all the mills are supplied with logs for early sawing, and have enough stock of logs on hand to keep them going up to the time the booms at Fredericton will begin to turn out logs, which will be about the first of June.

Prices for deals, to the English market remain about the same as at last writing, while there has been a further reduction of freights. No advance on deals has taken place. Stocks at Liverpool and Manchester have been reduced by about ten millions, but are still very heavy, much in excess of this time last year. The stocks of Baltic deals on hand at the same ports are also very heavy but it is said that no stocks of deals remain on hand at the Baltic ports, practically all having been shipped last fall before closing of navigation. This should have a good effect upon the New Brunswick deals, as, if stocks of Baltic are light at the mills, there will be no shipments for England until late in the season, and prices for New Brunswick deals should continue firm at least, for early shipment. Stocks of deals at St. John are fast being depleted and by the opening of navigation about all will have been shipped out. The mill yards are now practically cleaned of all low grade lumber and no stocks will be ready for at least three months. Small quantities of this low grade or refuse lumber are coming in on cars from the portable mills along the lines of the railroad, but the quantity is very limited. The demand for building material has been extremely light during the past four weeks. Very cold weather, aggravated by shortness of money on the part of real estate firms and builders, has practically caused building or repair work of any kind of stop. The factories report that very little new work is coming to hand, and they are simply keeping their hands employed making up stock material in preparation for future building when warm weather begins. The only building of any size which is now being figured upon is the new Tuberculosis Sanatorium to be built in the rear of Douglas Ave. This will take up about one hundred and fifty thousand feet of lumber. The contracts have not been let up to date. While large amounts of plans for house building are in hand,

very little of it has been let to anyone. The builders seem to think, in many cases, that the figures are too high, both as to material and labor, and in many cases are abandoning the idea of building.

Prices for future deliveries for the coming season, to the American market, are not in any way enticing. Very few, if any, of the mills here have sold any of their stocks for delivery during the coming season, preferring to wait until some further improvement takes place, or some definite signs of improvement appear. The base price of two-inch remains at about \$25 delivered New England points, but there is very little to offer either from here at the present time or through Nova Scotia, about all the mills preferring to cut English deals. Some laths for coming season's delivery have been sold for \$2.85 per thousand, on wharves here, but most of the mills are holding out for \$3.00 per thousand on wharves here. Shingles for present delivery are in good demand but stocks are about cleaned up, and no stocks will be ready until midsummer. The box shoo trade is not so good as it has been, caused by the restricted business all over the country. Labor is plentiful, but work is scarce, and the probabilities are that the men and their employers will be better contented this season than last.

About all the logs have been delivered from the yards to the banks of rivers, lakes and streams. The cut of all logs, if they should all be driven out of streams will be normal. Prices are very high, the highest that have ever been paid on the river, the reasons being that stumpage is becoming very scarce and the needs of the plants are more than the crop of logs. For bank logs, \$14 is being paid for spruce deal logs and \$10 for spruce batts., while logs from the upper St. John are being quoted at around \$14.50 per thousand. These prices will not leave any great profits for the mill owners, neither is there any fortune in them for the woods operator, as wages and conditions are very much against him.

Encouraging Improvement at Montreal

Montreal, March 9th (Special to the Canada Lumberman): There is practically no change in the lumber trade situation. The weather has continued cold, and has to a large extent retarded the commencement of extensive building operations, nevertheless, business is picking up in a very encouraging fashion. So far, the building permits have shown a falling off; for last month they totalled \$496,055, a decrease of \$151,912 as compared with February, 1913, and for the two months of this year the value is \$906,700, a decrease of \$198,597. Dimension timber is slow, owing to the fact that contracts have not yet been commenced. Hardwoods are in fair demand, and prices keep firm.

Ground wood is pretty well sold, so far as fresh ground pulp is concerned, and some of the old stocks on hand are diminishing. It is probable that the market will be strong until the spring freshets in the United States take place. Indications are that 1914 will be a quiet year for ground wood, on account of heavy output of news print by Canadian mills, which will displace United States news print. Chemical fibre is having a steady sale, the outlook being satisfactory. The exports during the last three months were double those of the corresponding period in the previous year.

Canadian news print mills are running full and shipping their whole tonnage. The Rainy River mill will commence operations in May, with a daily output of 150 tons. The Belgo-Canadian Company have ordered a Walmsley Machine, with a capacity of 50 tons per day, from England; while Price Bros. are likely to instal a 50-ton capacity news machine at Rimouski. The Donnacona Company will probably put in another machine at the end of the year, and it is stated that other companies have under consideration extensions to their plant. It is probable that, within a few months, about 825 tons of news print per day will be added to the output of Canadian mills, the present production being about 1,300 tons per day.

The customs department appears to be inclined to a rather strict construction of the tariff provisions admitting free Canadian lumber, says a United States exchange. Novelty sidings intended to give a shingled appearance to the outside walls of a house were recently assessed 15 per cent. ad valorem as "manufactures of wood" instead of being given free entry as "wood not further manufactured than sawed, planed, tongued or grooved."

Apple wood is the favorite material for ordinary saw handles, and some goes into so-called briar pipes.

SATISFACTION FOR SALE

OUR Lumber is manufactured with a Purpose. From the Stump to the Finished Product this Purpose is never forgotten. We aim to make our Products and Satisfaction synonymous. We want every car we ship to be filled not only with Lumber but with Satisfaction.

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Fancy Woods and Veneers

THEIR ORIGIN, VALUE AND
USE—COMMENT AND VIEWS
ON AN IMPORTANT BRANCH
OF THE TRADE.

A Question of Veneer Trimming

One of the questions of the day which is pushing itself forward noticeably is that of veneer trimming—when and how often veneer should be trimmed between the time of cutting and its final use, says the Hardwood Record. Usually the veneer user passes this question by on the theory that it is no concern of his when or how often veneer is trimmed just so he gets the material in shape and size to suit his need at the time of using. It does interest the veneer user, however, as well as the veneer maker, mainly because it is a question of utility or efficiency in utilizing timber, but also partly because there is involved a matter of getting the veneer to be used in exactly the shape that he wants it.

To understand this matter of trimming veneer, what it means and all its aspects and the when, why and how of it, we must go back to the time and place of its production and then follow it through to the finishing room.

Usually when rotary veneer is being made there is a part of the end of the block that is trimmed off in the process of cutting, being separated from the main sheet by what are termed score knives. This gives a veneer product which consists of a straight sheet or ribbon of veneer uniform in width or length and with the ends trimmed exactly square with the cutting and parallel with each other. It naturally makes a more presentable sheet of veneer than if the score knives were not used and the entire face of the block were peeled off because then there would be some irregularity in the width of the ribbon or the length of the veneer, and this is objectionable in a way.

Usually when the veneer is peeled out in this way it is cut up into dimensions of some kind. One may make it a business to cut to a size that will allow for shrinkage in drying and the final trimming to the exact dimensions required. Another may clip his veneer out in long sheets, as long as can be handled, and dry these sheets before clipping to dimensions.

In following this process the first noticeable feature about it is the waste incident to the end trimming by the score knives. This waste varies from one inch at each end to as high as three and four inches, sometimes, and in the course of a day's run it counts up considerably. If the logs are brought into the veneer mill in long lengths and are freshly cut with a drag saw before working, it is practicable, by careful attention, to reduce this end waste to a minimum of approximately one inch to each end. Where the logs are cut to short lengths in the woods, however, there is some checking in the ends and for this reason a more liberal allowance is made for end waste, the allowance being approximately three inches for each end.

One might well argue that it is immaterial whether this extra end length is trimmed off and thrown in the waste pile at the veneer machine or afterward. Indeed, one might urge that the sooner it was trimmed off and disposed of the better because it saves the handling of the waste through the driers and the trimmers and so on; but another factor enters there, which concerns the veneer user as well as the veneer manufacturer. It is the factor of shrinkage.

Veneer does most of its shrinking, though not all of it, sidewise. This is well known and understood. But the side shrinkage is not always uniform. There is some end shrinkage and there is also enough irregularity in the side shrinkage to draw the ends out of square and make another trimming necessary to straighten them out.

There have probably been wrangles galore over this matter of end shrinkage in veneer, mainly because we are too much in the habit of taking the attitude that end shrinkage is small, insignificant, and therefore needs but little attention. It is a known fact that where men are cutting drawer bottoms or other single ply stock to fit into grooved spaces neatly and cutting to exact dimensions with score knives at the veneer machine, it often turns out that the stock fails to fit. It will be short in length, it will be found so out of square that the sides and ends will not fit up at the same time. Then will come the charges from the user that the veneer manufacturer did not cut to specifications, and the veneer manufacturer will accuse his veneer cutter of carelessness in following instructions as to length.

The only way to get exact dimensions in veneer is to make those dimensions after the veneer is thoroughly dry. Cutting to specific dimension in either length or width before drying will result in disappointment if the requirements are very exacting. To give satisfaction where the requirements are exacting as to dimensions, the trimming to size must be done after the veneer is thoroughly dry, and generally it is best to do it with saws. Some thin veneer is cut

both crosswise and lengthwise with knives but to get the best results in trimming veneer to size the ideal way, either with thin veneer or thick, take it in bulk and trim it with saws.

This being true, the question naturally rises as to whether veneer should be trimmed twice or only once, whether it should be cut to length with score knives and made long enough for a re-trimming, or whether the score knives should be abolished and one trimming made to do it all.

The answer to the question depends somewhat on circumstances. Some trimming is quite often essential before drying. This is true especially of side trimming. Sheets of veneer must be cut to some sort of dimensions so that they can be handled, and in cutting to these dimensions notice must be taken of the final size requirements and allowance made for shrinkage in drying and for the final trimming to size. It requires the exercise of some care in making this allowance to prevent unnecessary waste on the one hand and to prevent an unusual amount of culls through lack of width on the other hand.

The usual allowance for shrinkage in width is ten per cent.—one inch for every ten. Some woods, notably maple, will not shrink this much, but gum will come very near it. The shrinkage allowance would be the same whether the veneer sheet is cut up into individual sizes or into sheets of two or three sizes. If the final dimensions are small, however, a saving in trimming allowance may be effected by handling the sheets in multiples of the final size.

In the end shrinkage and allowance for trimming we might argue that since there must be a final trimming after drying, the score knives should be taken off and let the full length of the block into the sheet with all its variations in alignment with the sheet. This argument is good, too, where the veneer is being dried, shipped and handled single ply. It involves only the drying and shipping of that extra length, and in return the extra length insures better stock after the final trimming and more room to do the trimming.

If the veneer is to be worked up into panels or built up lumber, however, there is the factor of glue, which cuts some figure. The economy in glue is just as important as economy in veneer, consequently the gluing up of two or three inches of extra length of veneer on each sheet and then finally trimming it off and throwing it away means the waste of quite a lot of glue, which is objectionable.

The ideal plan here would seem to be that of using the score knives to reduce the sheets to something near the end length desired and to eliminate the burden of the waste, while at the same time leaving enough length for the final trimming to exact size.

If the right kind of efficiency and utility were practiced at the veneer cutting and logs brought in in full length and carefully squared to length and as carefully handled in the machines, it should be possible to so reduce the allowance for end waste that it would not be necessary to use score knives and no trimming need be done on the veneer until after the final drying, other than that of chopping it up into sheets of a size that can be handled.

There is to-day a pretty strong disposition to abolish as far as practicable the trimming of green stock to exact dimensions with score knives and clipper and to run out the full sheets, dry them and then trim to exact dimensions. Where the veneer user is buying his stock in plain sheets that are to be trimmed to exact dimension before using he is perhaps better off in buying stock that has not been cut to length with score knives for it will give him room for trimming, and enable him to get a degree of precision in length that is not possible in trimming green stuff with score knives.

Arrangements for Hoo-Hoo Annual at Winnipeg

Canadian Hoo-Hoo, including Senior Hoo-Hoo Tenant, Vicegerent Snark Dutton, of Manitoba; Vicegerent Robinson, of Western Ontario; Vicegerent Cooke, of southern Saskatchewan; Vicegerent Manning, of northern Saskatchewan; Vicegerent Birnie, of Alberta, and several former Vicegerents recently met at Winnipeg, Man., to formulate plans for the twenty-third annual meeting of the Concatenated Order of Hoo-Hoo, which will be held in that city September 9, 1914. The meeting was called to order by Vicegerent Snark Dutton, who, in the course of his remarks, eulogized those who went to St. Louis last year and secured the annual for Canada. He called especial attention to the fact that the meeting would be of international interest, members from the United States and eastern and western Canada participating in the event.

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Mr. Car-builder
Mr. Ship-builder



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Retailing Lumber at a Profit

By C. L. Wright, Fairfield, Ia.

One of the most important reasons why so many high-class men and so much capital are engaged in the retail lumber business is that when rightly conducted it pays a very fair profit.

The making of a profit is no mysterious, elusive thing. Not only must first cost or purchase price be known, but also the cost of conducting the business, before it can be definitely known that a profit is being made and just what that profit is. Frequently sales price is made up by adding a percentage to purchase price. Goods sold on such a basis may or may not show a profit. An expense book with all items paid out entered, totaled for the year will give the cost of doing business and the relation to first cost gives the percentage. Only two of these costs will be considered here. If the owner is manager he should add to the total expense a fair amount for his salary and figure interest on his investment. Sales price made up in this way consists of three factors: Purchase price, operating cost and margin, added for profit.

When once determined upon, sales price should be the same to all alike. It is both fair and easy to make quantity discounts. Do not hesitate to ask and get a fair price and when price has once been given abide by it. Allow neither competition nor customer to make the price for you.

Certain interests have been very carefully keeping before the public the idea that the lumber industry is a highly organized business and that organization effected solely for the purpose of taking exorbitant profits. This idea has been fairly prevalent and the lumberman himself has frequently unconsciously lent his efforts toward convincing his customers of the truth of that view. Especially is that the case where the lumberman is timid or over anxious. A customer brings in a bill and intends to buy as cheap as possible. Of course he makes every effort to foster the idea of keen competition and low prices to get the business. Should the knife be lifted upon prices and a cut be made possibly several times, the bill may ultimately be sold at no profit or even at a loss and the customer be absolutely convinced that a fair profit is left and that the first price asked was a holdup.

If good material is kept in stock and a fair profit is added, emphasis may be placed on quality and by showing the lumber to the prospective purchaser attention is focussed on value instead of price. Two cases coming to my notice will illustrate. The customer came into the office with a small bill and stated that he already had figures on it and wanted the best price this lumberman could make. The bill was figured, the customer was taken out to inspect the material, and then the price was made. "Too high" said the buyer. "Can't you cut it?" He offered to cut both price and quality but staid by the first price made on the list submitted, though several attempts were made to get a reduction, and finally sold the bill, because, though the bill was high the material was good and just what he wanted. He was satisfied that the material was worth the price asked and the lumberman's refusal to lower the price helped fix that idea.

The second case was that of a large barn bill brought in by a farmer who usually traded with another dealer. The lumberman selling the bill has one price for all with quantity discounts. The bill was figured on this list and the price made with emphasis on value. The bill was finally sold on the first price made though it was higher than the other dealer's price. When urged to meet the lower price the lumberman replied that he was selling his own goods, that he knew the cost and the price was very fair on this grade of material, that he never attempted to fix a price on another man's lumber or take any man's price on his own goods. "You have seen the material and know it is good" he added. "Bring in your teams and haul it out," and the bill was sold. The man was not only satisfied but became a permanent customer. Too low a price must be unfair to some customer because it means an added amount later to balance up. To sell too low is as morally reprehensible as to get an exorbitant profit.

The fact that bills are usually sold on a closer margin than yard trade has led to fixed terms on estimate business. Yard trade is sold on the list. When cash it is profitable. If it is credit trade however it costs heavily in attention, bookkeeping and collection. This credit trade does not pay as it should and is frequently sold on very loose terms or on no stated terms at all. The customer comes in with a list of his needs and the statement that he can't pay for the material just now only to be told that it is all right, to take the goods along and pay whenever it is convenient. On such terms he may justly feel grieved if a statement comes along in thirty or sixty days. And why not? He was given all the time he wanted and is now asked to pay. If \$25 be obtained at the bank the terms are fixed and clear as if the loan were \$2,500. Regular terms tend toward cash purchases and the habit of early settlements. It ought not to be difficult to learn when the customer expects to settle and to state the terms of sale.

Fixed terms of sale help to make collections much easier than when the terms are loose or there are no terms. A policy of cash or early settlements affords opportunity to check up the new customer

who may have a tendency to over-extend his credit. A clear system of records aids on collections by helping to keep out errors and also in making the dealer know just where he stands. There is no golden rule for collections but there is a great deal to be said in favor of doing your own collecting. Do not turn your accounts over to a collection agency. Be just as free to ask for a settlement as your customer was to ask for the credit.

There is a collector in this district who has an enviable record. His plan is to collect one account at a time and to forget all others while making this collection. In order to make his debtor feel his particular account must be settled he never presents a statement but carries the amount in his head. When he has not met the man before, he goes out alone and introduces himself as representing his company which usually brings about an opening. Settlement is asked because the account is due and in a large majority of cases he succeeds. Checking by my own experience, I know that taking out a number of statements, I would be satisfied beforehand if I made 65 to 75 per cent. of the collections and that would be about what I would collect. Too much credit sometimes actually results in a loss of business. A customer will buy along until he has quite an account. It isn't convenient to settle the whole account and he knows it ought to be paid. Expecting that he will be asked to settle in case he goes to the lumberman he owes, he will go to his competitor and pay cash. This loss of business should be figured in as one of the costs of credits and there are several others. Credit on small trade will amount to a fair percentage of the year's business. Were all business cash, bookkeeping costs would be greatly reduced while collections and losses from unpaid accounts would stand no cost at all, and the profits from the turn over by virtue of having this money actively at work should be largely increased. Conversely with many credits these profits become losses.

Good clear records help to keep down outstandings and to make settlements easier in the case of disputed accounts. Let me suggest a loose leaf double entry ledger with transfer binder, as simple a journal as will serve your needs. It should show itemized sales both cash and credit, receipts and expenses, and may also show profit balance and stock sheet, and a daily sales book with duplicate or triplicate carbon copies, one page to each customer. In the case of credits or payment on account, the original is to be filed in an envelope filing system alphabetically arranged and the duplicate filed in a dated envelope, if a statement is to be sent out in 30 days. Such a system by collecting credits and debits will reduce the work of statement making fully 50 per cent. Cash terms filed in dated cash envelopes would make the system and records complete. Outside of the line yard concerns this seems to me to be one of our greatest weaknesses as business men, the keeping of a poor set of records. Between a good and a poor system of records there is all the difference between a profit and a loss. System tends toward knowing while no system leads to confusion and loss.

Of the several ways of making more profit theoretically the easiest way is to increase the margin. Practically that may not be advisable. Reducing operating expense will affect the balance at the end of the year's business in the same way and not offend the trade. The cash discount should always be taken. It will amount to a very considerable sum. When not taken it means an added expense of at least 12 per cent. Demurrage is another loss which is equal to a profit when saved. Not only unload so as to avoid demurrage payment but help others by unloading and releasing the cars in half the time allowed whenever possible. One very great saving has generally been given little consideration. The trade papers touch upon it but many of the suggestions have failed to get into actual practice, and that is a time study of every operation from unloading the car to stacking and getting the material on to the job, looking to an elimination of all waste motions and effort and a standardization of the world. The saving of this one association could not be estimated. A similar study of office methods and records and stock arrangements would be as valuable. I hope some time to see such a study made. It would mean a tremendous saving in time, effort and expense.

Careful analysis of the community served, its needs and possibilities will frequently open up new and profitable avenues of trade. The dealer should be a good roads and better farming enthusiast with prices on live stock where they have been for the last decade. Stock raising is not only much more profitable than grain farming but the stock raiser is a heavy consumer of lumber. Material is needed for barns, sheds, feed yards, feeding racks and bunks. Whatever helps to develop stock raising and its attendant increase in profits to the farmer also leads to more sales of building material and a corresponding profit to the lumberman. Then there is the matter of too many yards in a given territory which must be settled by lumbermen or have the matter settled by others.

I have not attempted to cover the whole field of profit making and expense reduction but have endeavored to touch upon some common place, but nevertheless important means of bettering the business.

Pocket planers should be used wherever the business will justify

DON'T buy from TEN firms: ONE WILL DO!

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From Head to Toe, get them the Best.

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Wool Warm and Wearable
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Fine. Made in all patterns
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"Woods Boss of the Road"
Wear like Armourplate

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and profitable lines should be pushed of course. Specialties where they do not require too much effort and pay a good return may well be given attention. Especially is that true where their sale means more and better business.

Almost every suggestion made depends upon the yard manager for its development and perfection. He is largely responsible for the business being what it is. He must be an all round business man with very complete knowledge of credits, materials, grades and methods. He is his customer's advisor and friend. The business fails or succeeds as he fails or succeeds. To be sure, some men would not get by in the best possible situation and with the best training while others succeed in any situation. However, the man who surmounts every difficulty makes his greatest success where his training has been thorough and complete and where the system he follows is the best. Here's to him. May his outstandings be low and his profits correspondingly high.

The Live Lumber Yard

A number of interesting addresses were delivered at the recent meeting of the Northwestern Retailers' Association. One of these, which was made the subject of much discussion by those present, was an address by E. W. Mayer, who talked about "The Live Lumber Yard." As a result of some remarks which he had heard at a previous meeting, he had decided to advertise his yard as a "Live Lumber Yard." The address which he delivered was an explanation of his methods of advertising. "No doubt the value of having a good name is the biggest asset a yard can have," he said. When a customer calls, he usually makes up his mind to one of two things, that a yard is either a poor or a good one. In order to give our trade no chance to class us among the poor ones, we have laid down these rules, and stated briefly, they are: Our customers will always find us at work; Our ads will change every week; Our bookwork shall always be up-to-date, and Our lumber piles always in order.

The fact that a customer always finds the yard manager and yard help at work, gives a strong hold on his trade. People like to trade with the man who is busy. Friendship and salesmanship are all very well to bring business, but if you are known as a hustler people will trade with you who might never do so if you were to depend on their friendship. During dull days, my helper, who is a carpenter, makes such things as hog-troughs, hayracks and the like. Whenever I find no other work to do, I make a round of the slow paying customers.

By our policy in changing our ads every week we make another strong bid for being known as a progressive yard. By the use of an ad clipping book, this part of our work is made easier. In this book we keep a copy of all our own ads and also other ads that we run across which we think may give us some ideas for a future ad. Our ad clipping book is a fund of ideas always at hand to help us when hard pressed to write an ad.

In writing our ads, we make as complete a change of copy each week as possible, and never allow our printer to set up our ad. the same way every time. Very often we do not say anything about lumber.

I will read you two ads, which we have used to show how we endeavor to interest people so that they will look up our ad. each week. The first ad. has the head line, "Do You Know?" and underneath in separate paragraphs this:

That the richest land in the state is right here at Triumph?

That if you emigrate the chances are two to one you will come back?

That the average person is richer, healthier and happier in this county than the average person anywhere?

Probably you are putting off building, why not have all those advantages you are looking forward to now? You know you are here but a short time and a long time somewhere else. Yours in a hurry.

THE LIVE LUMBER YARD

The second ad. has simply the head line "1913" and the following subject matter:

Do you realize that neither the Democrats nor the unlucky number "13" seem to be able to stop this busy building year of 1913? Everyone is planning and boosting, buying and building.

However our yard has been "Johnny on the spot" with material when wanted.

The year 1913 still finds us without having a delayed job. As the busy season is coming on, our yard, the largest stocked yard in this county is well prepared to serve you.

A plan we use to keep in touch with the lumber needs of our customers is, whenever we can, we find out ahead of time which of our customers intend to build or make repairs and make a memorandum, of all the information, in a book for this purpose. When the time is ripe to sell the lumber we send the prospective builder a letter reminding him of our desire to secure his trade. We have three separate letters ready to use for this purpose. Each of the letters is different from the others and we keep sending them until the customer buys his bill.

Converting the Slabs

The best way to convert slabs of pine and soft wood, or any other wood for that matter, is to first determine the produce they are to be converted into and then follow whatever method makes the shortest and best route to that end. In some of the work, however, there is a choice of several methods, and sometimes it is a little difficult to decide which is best or most convenient. In converting slabs into short length lumber, box shooks and things of that kind, there is a choice between using the old circular slab saw and the modern horizontal resaw and also between sawing the slabs full length and slicing them up into short lengths before working.

The old circular slab saw was and is still offered in various sizes and for working slabs of varying lengths. It seems, however, that the preferable order of business is to cut slabs into comparatively short lengths. Even if the slasher is not used, the feathery end is cut off generally with a cross-cut saw and only the thick part of the slab made use of.

It is seldom that slabs are thick all the way through, thick enough to make lumber or box shooks. It is usually a swell in the end or a bow in the centre of the log that makes a heavy place in the slab, and in either case the light part of the slab might as well be cut away first as last, unless it increases the task of handling the heavier part that does contain some good stock.

Then, the short length of slab can be worked on a short log special mill for this purpose with a circular saw, or it might be handled with the modern type of horizontal resaw.

This is one point of advantage of the horizontal resaw over the old type. The standard upright resaw generally has rolls between which the lumber is fed for resawing and it generally presumes on the lumber being uniform in thickness and not slabs with only one face. It is, of course, practical to rig a slab carrying outfit to an upright resaw and resaw slabs in this way.

The horizontal resaw offers a simple method of handling slabs, however; that is, the horizontal band resaw. With a flat feeding bed it offers a natural rest for the face side of the slab, and whatever thickness of stock is wanted can be sawed off and the slab returned until it is worked down and every bit of good stock in it obtained.

Whether the slabs are worked up right at the tail end of the mill as they are made, or the slab converting department is made a separate institution off to itself, the preferable time to work slabs is while they are fresh and green. This is true, too, of cull timbers and parts of framing and other stock that it seems best to work up into box shooks and short length lumber. It is not always practical to work them green and it is possible to work them when they are half dry, but the work is nicer and the results better if all of this stock can be handled while it is comparatively fresh.

It is perhaps better, too, if one can operate this slab converting business independently of the regular flow of the lumber through the mill. No matter whether the slabs are trimmed up on a regular cross-cut or run through a shaper, let them go on out of the mill and set this slab converting department to one side down below, or somewhere so as to get it all out of the way and free the mill itself of any encumbrance that might interfere with the regular running.

In a way this is pretty much the same order of business as making shingles as a side issue to a cypress mill, where certain block or timbers are cross-cut and sent to a separate department for conversion into shingles.

It may be practical in some mills, and desirable, to put some type of resaw right in the back end of the mill so as to handle the slabs and reduce them to some special thickness of lumber just as they come from the mill and save the extra handling required to run them off to a separate place. It depends somewhat on the character of the work it is desired to follow. If one has a call for shooks or other stock running uniform as to thickness and the run of slabs is fairly regular, one may be able to arrange either a modern horizontal resaw or a circular slab saw so that it can be operated practically as a part of the mill, just as the edger and trimmer and other mill floor equipment is operated. Then let the stock from this resaw be taken to its proper place and either piled and dried before trimming up, or be trimmed and converted into shooks, whichever is the order of the day.

Where this scheme can be carried out successfully it is probably the most economical method for converting slabs. It keeps them cleaned up all the time and saves handling and the accumulation of piles now and then. It has the one disadvantage, however, that it is inconvenient for bringing stock back out of the yard stock or cull timbers and framing, and things of that kind, that may need handling through the same system.

Other mills, of course, will find it more advantageous to do the extra handling and make this slab converting business a separate institution from the mill, and perhaps combine it with a shook or crate making compartment.—St. Louis Lumberman.

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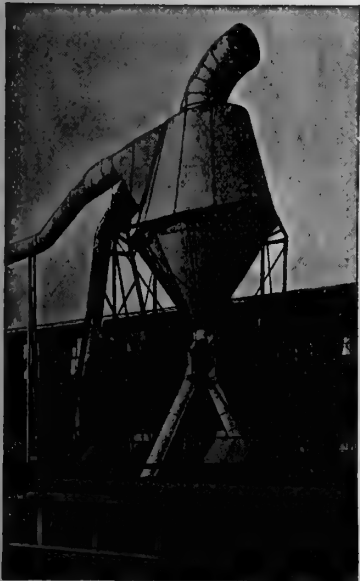
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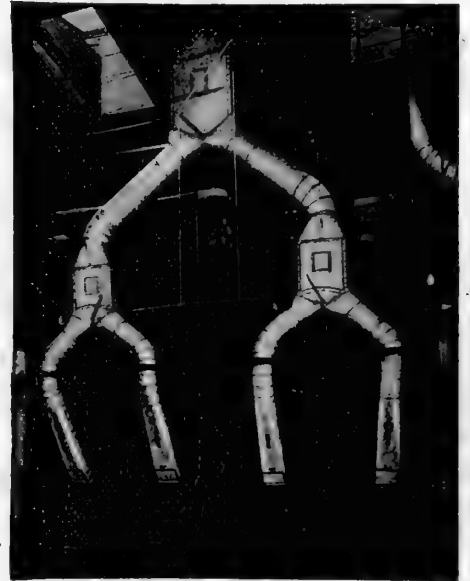
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The Boiler Feeders of the same system illustrated on the other side of the page.

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EDGINGS

Ontario

The sawmills and office of Foley Bros., at Foley's Lake, Ont., near Sudbury, were completely destroyed by fire on February 23rd.

The McAuliffe Davis Lumber Company, Limited, Duke Street, Ottawa, have secured the contract for furnishing the city with lumber for which it recently called for tenders.

West & Jackson, Tilsonburg, Ont., are seeking information regarding the best class of flooring and woodwork to use in the new library building. Details of the materials required can be secured on application to West & Jackson.

John Harrison & Sons, Owen Sound, Ont., started operating their sawmill day and night on March 2nd. The company have a large quantity of hardwood logs in the yard, which they intend to cut, so as to have them out of the way before the rafting season commences.

The Classic Furniture, Limited, has been incorporated with a capital of \$200,000, with head office at Stratford, Ont., to carry on business as furniture manufacturers. The provisional directors are G. McLagan, D. McK. Wright, J. G. Davies and H. S. Robertson, manufacturers, all of Stratford, Ont.

The London and Petrolia Barrel Company, Limited, has been incorporated with a capital of \$500,000, with head office at London, Ont., to carry on a cooperage business. The provisional directors are J. P. Forristal, manufacturer; Sir George Gibbons, K.C., and G. S. Gibbons, barrister, all of London, Ont.

The John C. Gilchrist Lumber Company, Limited, has been incorporated with a capital of \$200,000, with head office at Toronto, Ont., to carry on business as lumber merchants. The provisional directors are J. C. Gilchrist, G. H. Gilchrist, and S. M. Gilchrist, lumber merchants, and G. C. Paterson, all of Toronto.

The Canadian Handle Manufacturing Company, Limited, London, Ont., whose factory at Strathroy, Ont., was recently destroyed by fire, report that they intend to rebuild as soon as conditions are favorable. The new plant will be much larger than the old one and the sawmill will be in a separate building from the factory.

The Canada Pole and Shaft Company, Limited, has been incorporated with a capital of \$400,000, with head office at St. Catharines, Ont., to carry on business as manufacturers of poles, shafts and vehicles of all kinds. The provisional directors are J. K. Kernahan, J. S. Campbell, and Vernon Moyer, all of St. Catharines, Ont.

The Northern Ontario Pulp and Development Company, Limited, has been incorporated with a capital of \$150,000, with head office at Toronto, Ont., to carry on business as pulp and paper manufacturers. The provisional directors are H. E. Manning, B. H. L. Symmes, R. H. Green, P. W. Beatty and W. L. L. Gordon, all of Toronto, Ont.

The Bertrand Lockhart Lumber Company has been incorporated with a capital of \$75,000, with head office at Port Arthur, Ont., to carry on business as lumber merchants, etc. The provisional directors are A. G. Beaman, J. H. McLennan and J. P. Bertrand, lumbermen; H. A. McKibbin, financial agent; and W. Marrigan, contractor, all of Port Arthur, Ont.

Sealed tenders are being received up to March 18th, at 12 o'clock noon, by F. C. Clarkson, 15 Wellington Street West, Toronto, for the purchase of the goods of the H. & A. Ogilvie Company, Limited, Kelso Mines, Ont., including a sawmill and equipment in the township of Walker, one and one-half miles from Monteith Station on the T. & N. O. Railway. The mill is located one-half mile from the tracks and is 24 x 90 ft., of two storey frame construction. It is valued at \$5,200. Tenders are also being received for 80,000 feet of lumber and 180,000 feet of logs.

The Windsor Lumber Company, Windsor, Ont., acquired five acres of ground with railroad sidings on Wyandotte Street and Cameron Avenue, and will operate a wholesale and retail lumber business. It will have ample facilities for handling lumber economically and will carry a large, diversified stock ready for immediate delivery, and will install machinery for manufacturing special work. James C. Scofield, formerly of Woodstock, is manager of the company. He is especially well known through his ten years' connection with the Paine Lumber Company, of Oshkosh, Wis. The Windsor company is expected to be ready for business early in the spring.

Eastern Canada

La Compagnie J. P. Dupuis, Limitée, lumber dealers, Montreal, P.Q., has been registered.

The Montreal Pile Driver Lumber Supply Company, Montreal, P.Q., has been registered by Euclide Cote and Donat Cote.

Kirk & Cook, contractors, North Sydney, C.B., are reported to be in the market for a quantity of cedar poles and timbers for their railway construction work.

The Thos. Bell Lumber Company, Princess Street, St. John, N.B., recently secured a contract for furnishing the city with a supply of lumber for which it called for tenders.

Pulp and Lumber Limited, has been incorporated with a capital of \$100,000, with head office at Montreal, Que., to carry on business as pulpwood and lumber manufacturers. The provisional directors are H. Lampard, engineer, of Westmount, Que.; H. M. G. Bellevue, and B. C. Bellevue, of Montreal, Que.

La Compagnie Electrique Des Rivières has been incorporated with a capital of \$40,000, with head office at Notre-Dame de Stanbridge, Que., to carry on business as a power company and manufacturers of furniture, sashes, doors, etc. The provisional directors are H. Renaud and A. Bombardier, of

Notre-Dame de Stanbridge, Que.; A. Desautels, Saint Gregoire, Que.; A. Fournier, Notre-Dame de Stanbridge, Que., and A. Lemire, Lachine, Que.

La Compagnie Industrielle de Joliette, Limitee, has been incorporated with a capital of \$12,000, with head office at Joliette, Que., to carry on business as lumber manufacturers, etc. The provisional directors are Z. Bacon, C. Ladouceur, N. Boucher, manufacturers, and Louis Trudel, joiner, all of Joliette, Que.

At a meeting of the bondholders of the Ouitachouan Falls Paper Company, which was held in Montreal last week, arrangements were made for the transfer of the former company to the Chicoutimi Pulp Company, of Chicoutimi, Que., who already owned a controlling interest, so that the two concerns are now operated as one.

The St. Lawrence Pulp & Paper Company, Gaspé, Que., have awarded a contract to the Canadian General Electric Company for the supply of two 1,000 kw. turbo-generators. The Structural Steel Department of the Canadian Allis-Chalmers, Limited, will also supply the steel necessary in the erection of the pulp and generating buildings at present under way.

The Quebec Harbor Commissioners are calling for tenders for the supply of square hewn spruce timber, to be delivered during May, June and July next. The timber is not to have more than 1½-in. of wane. It must be sound, straight and free from cross gum seams, and must be 18 ft. and up in length, the average length to be not less than 24 ft. Twenty per cent. of the total quantity is to be from 10 x 10 in. up to 11 x 11 in. The remainder is to be from 11 x 12 in. up to 13 x 13 in. Delivery is to be made at Indian Cove or at the Louise docks, as may be directed.

The Bathurst Lumber Company, Bathurst Village, N.B., have completed plans for the erection of a fifty-ton sulphite pulp mill at Bathurst. Work will be commenced at once, the organization having been completed already. The plant will be in a position to place its paper upon the market by May 1st, 1915. The output will be the highest grade of thirty-hour cook sulphite, bleached electrolytically. The mills will be operated under the name of the Bathurst Pulp & Paper Company, Limited, with a capitalization of \$3,000,000. Mr. Angus McLean, general manager of the Bathurst Lumber Company, will be president of the new company, while A. G. McIntyre, former editor of the Pulp and Paper Magazine and superintendent of the Forest Product Laboratories, a recent graduate of McGill University, will be the manager. The mill is to be situated on Bathurst Harbor and the Nepisquit and Tete-gauche rivers, which empty there, contributing materially to the economical operation of the plant, which is also favored by the vicinity of adequate transportation advantages and a good labor market. The Bathurst Lumber Company owns 2,800 square miles of limits extending from the plant itself.

Western Canada

The A. J. Burton Saw Company, New Westminster, B.C., lost its plant by fire recently.

The Alberta Lumber Company, Limited, has increase its capital from \$50,000 to \$200,000.

The Northwest Lumber & Commission Company, Limited, Winnipeg, is applying for permission to increase its capital stock from \$20,000 to \$100,000.

The Shushartie Lumber Company, Limited, has been incorporated with a capital of \$250,000; with head office at Vancouver, B.C., to carry on business as lumber merchants.

The Vancouver Cedar Mills, Limited, has been incorporated with a capital of \$750,000, with head office at Vancouver, B.C., to carry on business as timber merchants, etc.

The Canadian Wood Distilling Company, Limited, has been incorporated with a capital of \$100,000, with head office at Cranbrook, B.C., to carry on business as distillers, wood preservers and lumber merchants.

The Westminster Woodworking Company, Lulu Island, New Westminster, B.C., has lost its plant by fire. The loss, which included equipment and three freight cars on a siding, totalled \$75,000. Damage to the plant and stock amounted to \$47,000, with insurance of \$40,000. The plant will be rebuilt at once.

The Brooks-Scanlon Lumber Company, of Vancouver, has bought the shingle mill at Burrard Inlet of the Howe Sound Timber & Logging Company, of which C. S. Roray is president. The latter company will develop its limits on Dakota Creek, and if the shingle market continues to improve they will erect a mill.

Moose Jaw, Sask., capitalists have organized the Kootenay Mills Limited, to take over the sawmill and sash and door factory at Kaslo, Kootenay Lake, formerly operated by the W. E. Cooke Lumber Company. J. W. Sifton, president of the Executors & Administrators' Trust Company, Moose Jaw, is president; R. H. Fulton, general manager of the Bank of Saskatchewan, secretary and treasurer. Fire burned out the two operating mills on Kootenay Lake, and the new concern at Kaslo should find considerable local business.

Some exceptionally interesting logging work will be carried on during the coming summer upon scrub lands on the outer fringe of North Pacific Islands. The timber on these areas is mainly pole cedar. This will be a new industry for the north and the local conditions will probably call for the exercise of considerable ingenuity in connection with the methods adopted. The ground is soft and marshy in most cases and will not permit of the use of horses. The timber, moreover, is too light for the profitable working of the regulation steam "donkey."

Sealed tenders are being received by the chief forester, Victoria, B.C., until noon on March 26th for the purchase of license X126, to cut 1,355,000 feet of Douglas fir and cedar on an area adjoining P. R. 2330 Pendrill Sound, New Westminster district. Two years will be allowed for removal of the timber. Tenders are also being received until noon on April 20th for the purchase of license X129, to cut 4,760,000 feet of Douglas fir, hemlock and cedar on an area immediately west of lot 105 Valdes Island, Okishollow Channel. Two years will be allowed for the removal of the timber. Tenders are also being received until noon on March 26th for the purchase of license X101, to cut 1,354,000 feet of Douglas fir, cedar and hemlock on an area adjoining Lease Lot 24, Range 1, Coast district, located on Mayne Passage. Two years will be allowed for the removal of the timber.

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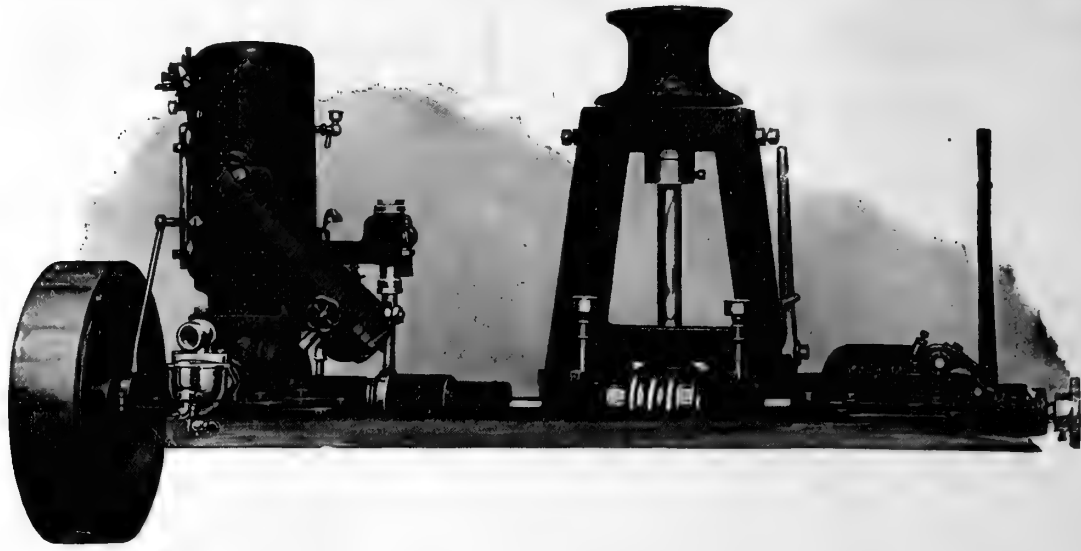
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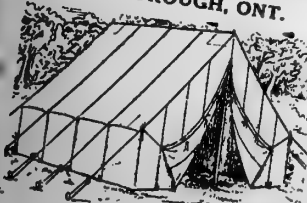
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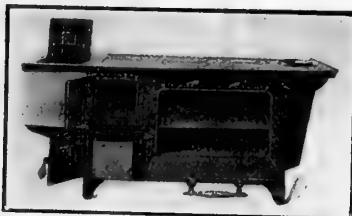
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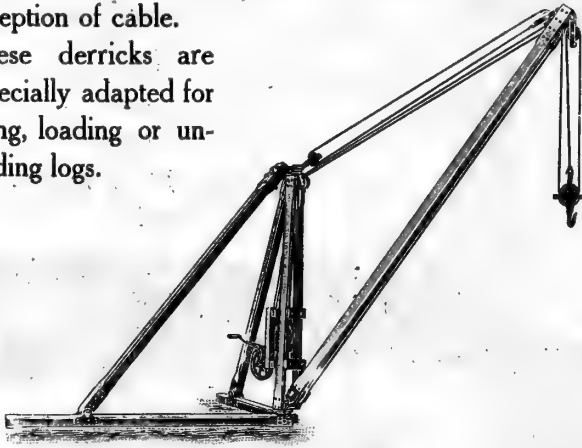
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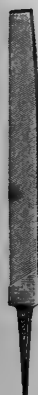
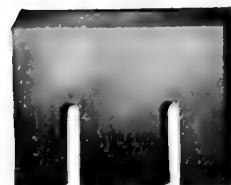
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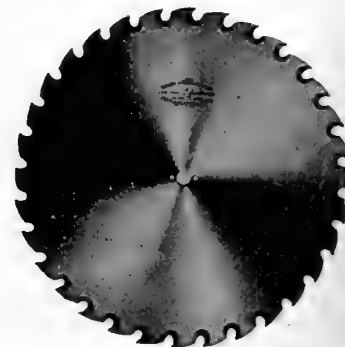
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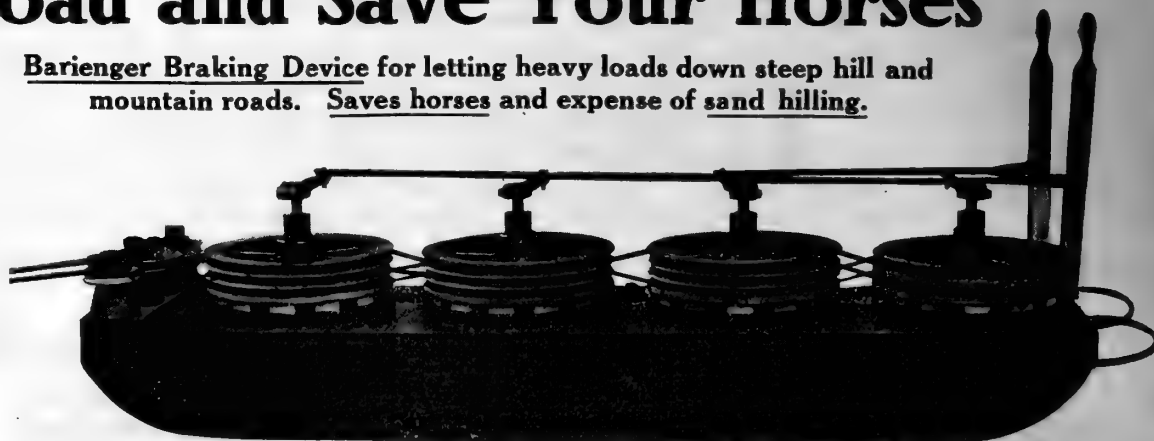
Besides avoiding accidents and eliminating sand hilling this braking device can greatly reduce your hauling costs. Larger loads may be handled and fewer men employed.

Our catalogue fully explains

Ryther & Pringle Co.

Carthage, N. Y.

Barienger Braking Device for letting heavy loads down steep hill and mountain roads. Saves horses and expense of sand hilling.



A Good Belt Saves Money

THE money wasted in keeping a stretching belt taut amounts to a surprising figure. If you use "Goodhue Belts" in your mill or factory you can save most of this money because "Goodhue Belts" stretch less by 15 to 25 per cent. than any other belt. They are made from skillfully selected hides with the stretch taken out of each section before it is made up into the belt.

According to the conditions under which the belt is to run, we recommend "Extra," "Standard" or "Acme Waterproof" belts.

Send for further particulars and prices.

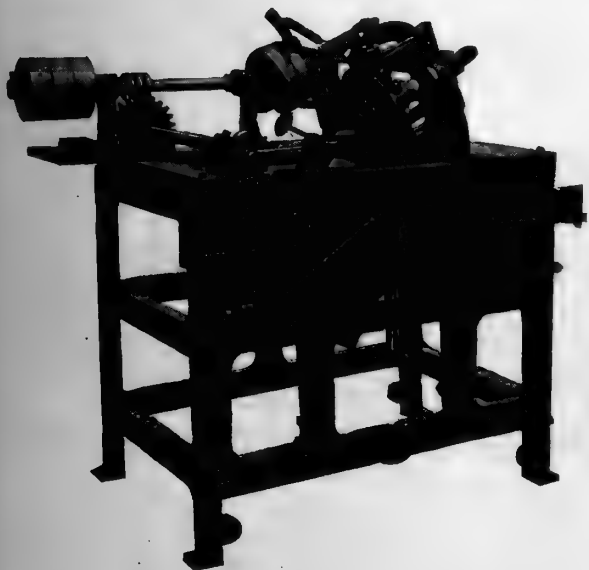


GOODHUE BELTS
J.L. GOODHUE & CO. Limited.

DANVILLE — QUEBEC.

A New Saw Sharpener

United States Patent For Sale



This new and adequate saw sharpener is designed to give a keen cutting edge to the saw teeth.

No part of the mechanism is interfered with by emery dust. Every provision is made to enable this machine to do its work, thoroughly, quickly and accurately.

The sharpener was invented in Canada by us and at present we are sole manufacturers. It is patented in Canada and the United States. The patent rights for the latter country are for sale. If you are interested write us for further particulars.

Breeze, Denison & Company, Newburgh,
Ont.



WHEN RIP VAN WINKLE DID AWAKE HE WAS TWENTY YEARS BEHIND THE TIMES.

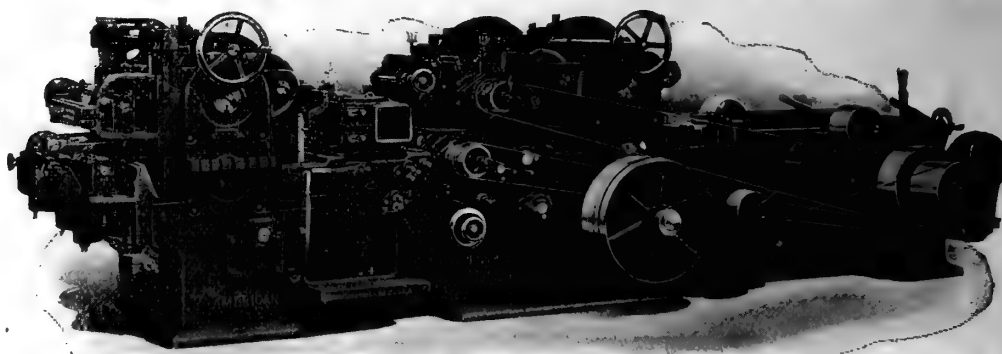
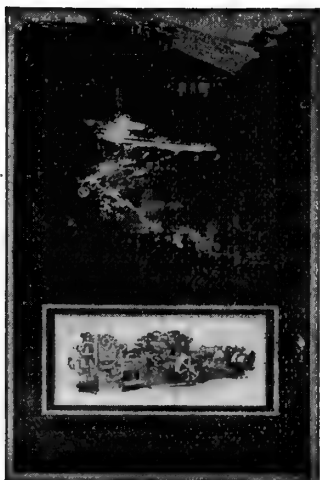
Men of his type engaged in the lumber business never use a Seventy-Seven Planer and Matcher; but if you will consult the Red Book you'll find that those fellows who hang onto slow and antiquated planing mill methods are the ones who drop out of that book, because, of course,—they drop out of business.

There are hundreds of 77's in the mills of the South and West and elsewhere, and every machine is a marked success—and not only that, the firms employing 77's are successful.

These are actual facts—subjects for serious reflection.

Let us send you a catalogue of the "77" Model 5.

Incidentally, did you ever hear of a "77" for sale on a second-hand list? you never did.



Sales Offices:
NEW YORK
90 West Street
CHICAGO
Sharples Bldg.
NEW ORLEANS
Canal-La. Bank Bldg.

American Wood Working Machinery Co.
Executive and General Sales Offices:
Rochester, N. Y.

Sales Offices:
PORTLAND, ORE.
N. 19th and Wilson St.
SPOKANE, WASH.
Montgomery and Pearl Sts.
SAN FRANCISCO
46 Fremont St.

ENGINES and BOILERS

OF ALL TYPES AND SIZES

HEATERS, STACKS, RETORTS, TANKS

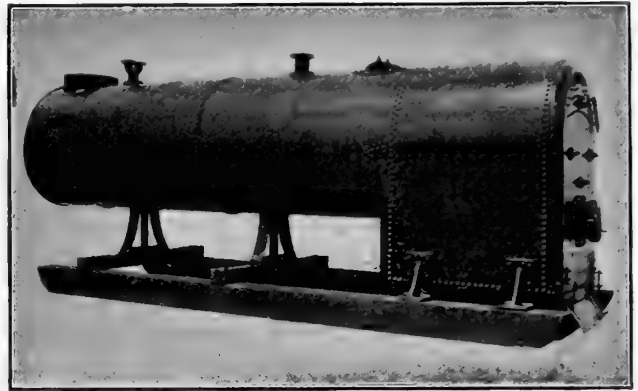
We cater specially to the lumbering industries

Write for Prices and Information

E. LEONARD & SONS

LONDON, CANADA

Agencies and Warehouses:—ST. JOHN, N.B. MONTREAL, QUE. TORONTO, ONT.
WINNIPEG, MAN. CALGARY, ALTA. VANCOUVER, B.C.



Locomotive Boiler on Skids



Atkins' Inserted Tooth Cutoff Saw

McLean Pattern

A sensation in the Saw World. The smoothest cutting saw. Requires less hammering. Wears longer. Necessary set is in the teeth. No change in diameter of Saw. Teeth do not break out. Short teeth, holds Tension. Made in sizes from 20 to 86½ inches. 9 to 5 gauge.

Order now if you expect shipment within sixty days.

Our capacity already overtaxed. Manufactured exclusively by

E. C. Atkins & Company

Makers of Sterling Saws

Factory, Hamilton, Ont.

Vancouver Branch, 109 Powell St.



PEAVIES

Cant Hooks, Boom Chains, Timber Dogs

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

MERRITT MFG. CO., Lockport, N.Y.

Veneer Machinery

THE "MERIT" LINE of Veneer Cutting, Dimensioning and Drying Machinery is designed first, for veneer mills cutting high grade furniture and commercial veneer from expensive timber, and second, for basket, crate, box and barrel factories using cheaper veneer cut from the less expensive woods.



Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.

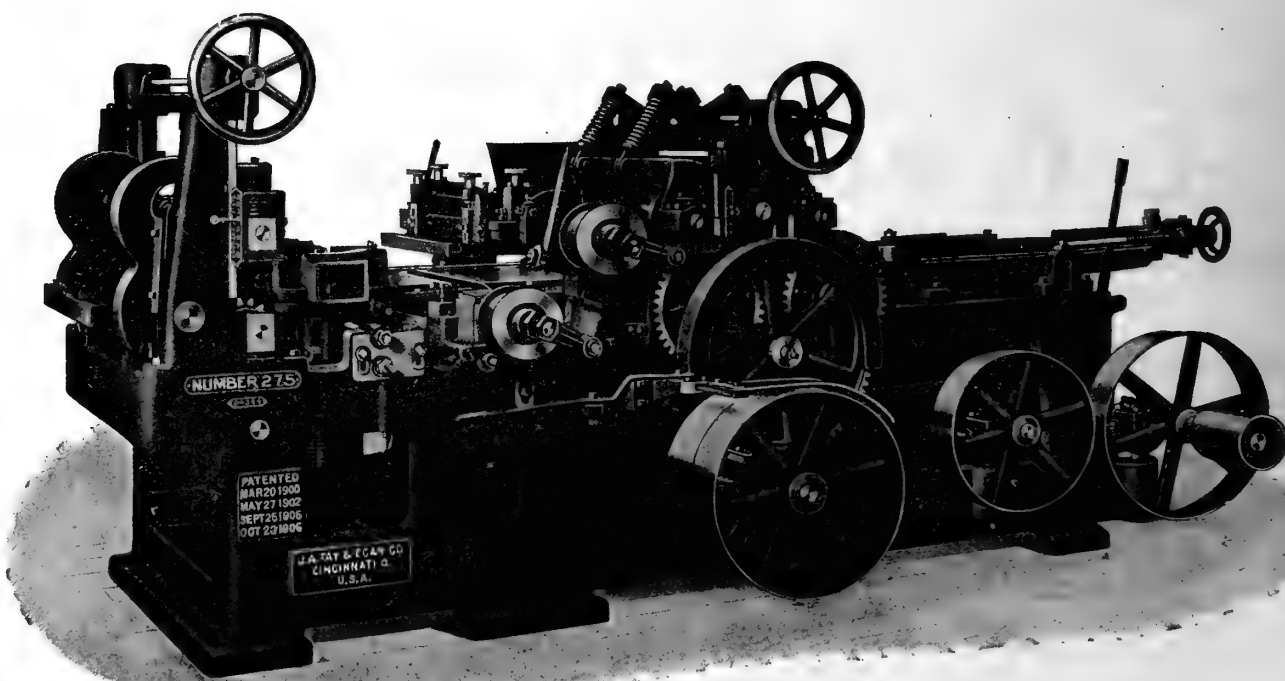
What I Can Do For The General Planing Mill

You don't have long runs on a few kinds of patterns, the kind that requires a "333" — your work is mostly short runs, different kinds, different sizes, different patterns—the kind that need me. Here's what I can do for you:

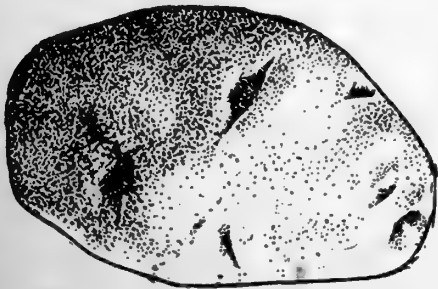
1. I will take care of all your matching and sizing up to 24" x 8".
2. I will do all your double surfacing up to my full rated width.
3. I will run all the flooring you need.
4. I will serve you as an inside moulder carrying formed cutters up to 1 1/4" projection.
5. I am readily accessible in every part, so that changes can be made quickly, easily and economically.
6. I have all the conveniences, all the time-saving adjustments and all the grade-raising value of the latest fast-feed matchers.
7. I have a mechanically perfect drive that makes every ounce of power count.
8. I run at a low operating cost, both for power consumed and upkeep expense.
9. I am medium in weight and size.
10. I am also medium in price, so that any mill can afford to put me in.
11. I am making money—big money—for hundreds of successful planing mill owners, men who, like you, are operating a general purpose mill.
12. I will do the same thing for you.
13. I invite you to write today—now—to my designers and builders.

J. A. FAY & EGAN CO.

465-485 W. Front St., Cincinnati, Ohio, U. S. A.



Potato Scale Boiler Cleanser



This compound is a deadly enemy to scale and not only removes scale from tubes but if used regularly in the feed water prevents the formation of scale.

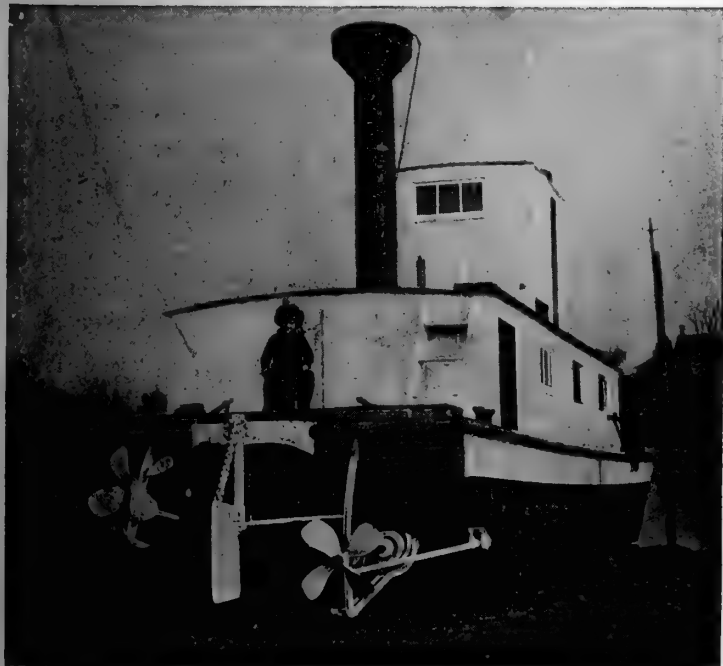
It contains no ingredients that can in any way harm metal.

Potato scale is sold under a guarantee—thousands are using it and are perfectly satisfied. Write for sample keg.

C. C. Snowdon

Box 1384

Calgary, Alta.



**Not altogether what we
say but what users say**

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs,
in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

The wheel that holds its shape—
keeps a free cutting face—is the
wheel that holds its place in the
sawmill.

Aloxite Saw Gumming Wheels



Are helping the filers in the big
and little mills almost every-
where to better saw service—
better gummed saws in less time.
They cut free, fast, and cool—they do
not case-harden the saw—you can feed
them right into the gullet as fast as you
will, and they stand up on the job.

A trial wheel will show you their real efficiency

THE CARBORUNDUM COMPANY

WORKS:

Niagara Falls, N. Y., Reisholz Düsseldorf, Ger. Manchester, Eng.

STORES:

New York Chicago Boston Philadelphia Pittsburgh
Cleveland Cincinnati Grand Rapids Milwaukee

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	\$55 00	57 00
1 1/2 inch No. 1 cuts and better	64 00	63 00
2-in. No. 1 cuts and better	67 00	72 00
1 1/2-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	45 00
5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	36 00	36 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
4/4 No. 3 cuts	28 00	28 00
5/4 and 6/4 No. 3 cuts	32 00	32 00
8/4 No. 3 cuts	33 00	33 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
1 x 10 and 12 mill cull stocks	24 00	24 00
1-in. mill cull sidings	22 00	22 00
5/4 and 6/4 x 4 m.r., m.c. out.	26 00	26 00
5/4 and 6/4 x 5 m.r., m.c. out.	26 00	26 00
5/4 and 6/4 x 6 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out.	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out.	36 00	36 00
2 x 10 common	26 00	26 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1 1/2-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill culls	20 00	20 00
Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16 ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 50	24 50
2 x 4 to 12-in., 12 and 14 ft.	23 50	23 50
2x4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 22 ft.	28 00	28 00
2 x 4 to 12-in., 24 ft.	27 00	27 00
2 x 4 to 12-in., 24 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00	34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	34 50	34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00	35 00
6x16, 8x16, 10x18, 12x20, 14x20, 18x20 up to 32 ft.	35 50	35 50
10x20, up to 32 ft.	36 00	36 00
6x18, 8x18, up to 32 ft.	36 50	36 50
6x20, 8x20, up to 32 ft.	37 50	37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	44 50
No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1 1/2, 1 1/2 and 2-in. Fir rough	47 00	47 00
1 1/2-in. No. 1 4-ft. pine lath	4 50	4 50
1 1/2-in. No. 2 4-ft. lath	4 20	4 20
1 1/2-in. 32-in. pine	1 60	1 60
1 1/2-in. No. 1 4-ft. hemlock lath	3 75	3 75
1 1/2-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XX B. C. cedar shingles	2 25	2 25
XXX 6 butts to 2-in.	3 20	3 20
XXXX 6 to 23-16-in.	3 40	3 40
XXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1 1/2 and 2-in.	60 00	60 00
Ash, white, No. 1 common	45 00	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	39 00	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	39 00	39 00
Birch, No. 1, com. and bet., 4/4	33 00	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, No. 2 and 3, common	18 50	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nds, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4	75 00	75 00
and 16/4	75 00	75 00
White oak, plain, 1st and 2nds, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1 1/2	70 00	70 00
and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4	75 00	75 00
and 16/4	75 00	75 00
White oak, 1/4 cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, 1/4 cut, 5/4 and 6/4, 1sts and 2nds	88 00	88 00
White oak, 1/4 cut No. 1 common	55 00	55 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1 1/2-in. & 1 1/2-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	45 00
Pine good strips:		
1-in.	40 00	42 00
1 1/2-in. and 1 1/2-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1 1/2-in. and 1 1/2-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1 1/2 and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	20 00	22 00
1 1/2, 1 1/2 and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00	25 00
Pine, box boards:		
1" x 4" and up 6'-11'	17 00	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1 1/2-in.	19 00	21 00
mill culls out, 1 1/2-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7"	20 00	21 00
and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9" 10" and up, 12'-16'	22 00	24 00
1 1/2"x7" 8-9" and up, 12'-16'	22 00	24 00
1 1/2"x10" and up, 12'-16'	22 00	24 00
1 1/2" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1 1/2, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1 1/2-in. x 4-ft.	4 00	4 35
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1 1/2-in.	3 00	3 25
Red pine mill run	3 25	3 60
Hemlock, mill run	2 75	3 00
32-in. lath	1 80	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70	75
Oak—Michigan and Ohio		
By the dram, according to average and quality	65	72
Elm		
By the dram, according to average and quality, 40 to 45 feet	80	90

By the dram, according to average and quality, 30 to 35 feet

60 65

Ash

13 inches and up, according to average and quality, per cu. ft.

25 30

Average 16 inch

30 40

Birch

14 inch, per cu. ft.

20 22

15 inch, per cu. ft.

24 26

16 inch, per cu. ft.

28 30

18 inch, per cu. ft.

32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.

\$20 00 21 00

Oddments

17 00 18 00

Boards, 1 and 2 in.

16 00 18 00

Birch Planks

1 to 4 in.

17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.

\$54 00

1 in., 8 in. and up wide

62 00

1 1/2 and 1 1/2 in. and up wide

65 00

2 in. and up wide

70 00

Cuts and Better

4/4 x 8 and up No. 1 and better

55 00

6/4 x 8 and up No. 1 and better

65 00

8/4 x 8 and up No. 1 and better

65 00

6/4 x 6 and up No. 2 and better

52 00

8/4 x 6 and up No. 2 and better

54 00

6/4 x 6 and up No. 3 and better

46 00

8/4 x 6 and up No. 3 and better

50 00

No. 1 Cuts

1 in., 8 in. and up wide

42 00

1 1/2 in., 8 in. and up wide

55 00

1 1/2 in., 8 in. and up wide

57 00

2 in., 8 in. and up wide

60 00

2 1/2 and 3 and 8 in. and up wide

75 00

4 in., 8 in. and up wide

85 00

No. 2 Cuts

1 in., 6 in. and up wide

31 00

1 1/2 in., 6 in. and up wide

42

THE SHIMER CUTTER HEADS

Quality Machine Work

The planing mill man, furniture worker or any one who uses machines to finish wood products, will always find in the Shimer System of Tools the remedy for mill troubles, the power to increase output and the facilities to make a superior product.

No matter whether your work is Single Matching, Double Matching, Ship Lap, Jointing, making Glue Joints or Door and Sash patterns, if you desire to turn out quality product get the Shimer System in your mill.

Look over this page and then let us have your specifications.



The "Shimer Limited" Cutter Heads, with Expansion, Fig. 627 and Fig. 628.

**For the
High
Speed
Matcher**

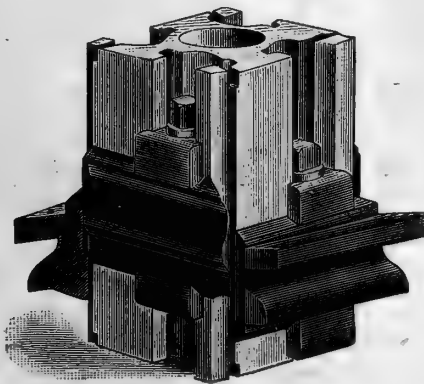
These Heads have a chucking device which self-centers them on the spindle and grips firmly thereto when the device is drawn up, overcoming the objectionable set screw as a means of fastening the Head to the spindle. It is reliable and practically perfect in results.

The Bits carry a larger areal surface and the Bit chambers are of greater depth to compensate for the new acute angle given to the Bits for greater relief to the parts coming into contact with the lumber.

They are simple and strong throughout, have no delicate parts to break down or get out of order, and are safe and efficient tools for matching flooring, etc., at high speeds.

Price, net, for Flooring, \$72.46 the set complete.

The Shimer Combination Head for Door, Sash, Blinds and Mouldings



The Head illustrated herewith is intended more particularly for the mills which make only a few mouldings or Door and Sash patterns and change work several times a day. Where a mill runs on stock or has much work to do we advise running the Shimer Heads with Circular bits on account of the greater wear and the fact that the Heads are always ready to be slipped on the spindle.

This particular outfit consists of one Combination Head with one set of Sash Bits, one set of Door Bits, one set of Cope Heads with Door Cope Bits and two Sash Cope Bits for the lower Door Cope Head. The outfit is sent complete for the low price of \$47.31.

The Bits are quickly changed and set to the gauge, when the Door and Cope moulds or the Sash and Cope moulds will match to a nicety. There are no complications to puzzle or annoy operators. As the Bits are moulded on the back at an angle, they work with perfect clearance and maintain standard patterns. Bits can also be adjusted for different thicknesses of Door and Sash mould.

This Head is very strong and durable and with its combinations is applicable to every class of work. It will take Bits to make Door, Sash and various other mouldings and these Bits are quickly and accurately changed and adjusted by the use of a gauge.

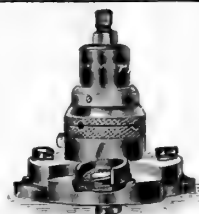
We guarantee these tools to be of the best material and workmanship, and will send them on 30 days trial to any responsible lumberman returnable if not satisfactory. Send measurements at once.

Our Popular Cutter Heads

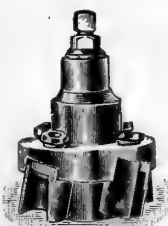
Figs. 202 and 203 are the leading tools, having Conical Duplex Bit Seats and The Shimer Cutter Head Expansion. Flooring Bits will work from 13/16 to 1 1/2-in. in thickness with tongue and groove proportions expanded to suit.

Price, net, complete with one set of flooring Bits, the gauges for setting the Bits and wrench ... \$40.95

Extra Bits for Flooring ... 11.44
Extra Bits for Ceiling ... 10.40



With 4 Bits to each Head



Jointer Heads

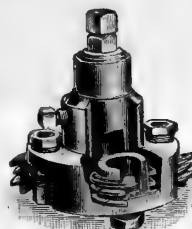
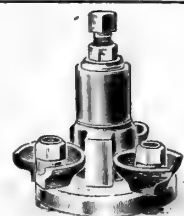
Figs. 54 and 55, with four Bits in line of work, shear the cut downwardly to insure a sharp and clean upper edge. They cut clean and free and are shipped out under our guarantee to give satisfaction.

Price, Heads, complete with Bits for 15/16 to 1 1/2-in., net only ... \$31.20
Extra Bits 1 1/2-in. face, the set ... 10.40
Extra Bits, 2-in. face, the set ... 12.48

O. G. Batten Heads

Figs. 48 and 49 represent our best tools for this work, having 3 Bits in line of cut so arranged upon their seat inclines as to protect all but cutting edge against friction and wear.

Price, two Heads, complete with Bits, net only ... \$31.98
Extra Bits, each, net ... 2.08



Double Ceiling Heads

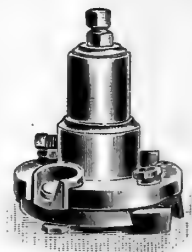
Figs. 45 and 46, are made in solid section, steel forged, with Bits of special design to cut two tongues on one edge of board, and two grooves on opposite edge, to be re-sawed for two thin boards tongued and grooved. Very complete.

Price, with one set of Bits, net ... \$40.94
Extra Bits, per set of (8) ... 16.64

Ship Lap Heads

Figs. 38 and 39 are made of steel forgings, in solid section, designed especially for heavy duty. The bit seats have the latest improved slants to provide free cutting edges, and we sell them at the following low and net prices:

Heads with one set of Bits to work 15/16 to 1 1/2-in. thick, net ... \$34.84
Extra set of Bits ... 11.96



Door, Sash and Coving Tools

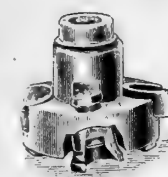
That save all the hand fitting. No changing of patterns, therefore, no trouble in framing door and sash parts when matched with the Shimer Cutter Heads.

DOOR AND SASH HEADS

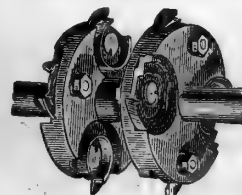
Fig. 82, solid flange, Door Head ... \$10.75
Fig. 84, Expansion Door Head ... 13.35
Fig. 86, solid flange, Sash Head ... 9.75
Fig. 206, Expansion Sash Head ... 12.35
Bits to work 1-in. to 1 1/4-in. Doors, 4 ... 7.28
Bits extra to work 1 to 1 1/2-in. Sash (2 Moulded Bits, \$4.30; 2 Rabbeting Bits, \$2.86) ... 7.16

COPE HEADS

Fig. 83, Cope Heads (2) ... \$12.90
Coping Bits, each ... 1.43



The Shimer Box Board Matching Heads



make a uniform cut and close fit, as well after years of use as when new, with no friction upon the Bits. For thicker material the Bits can be expanded.

Price for two Cutter Heads to match 3/4 to 1 1/4 inch, \$29.15.

We also furnish when desired a Yoke Mandrel with self-oiling boxes, boxed f.o.b. Galt, \$11.05.

Samuel J. Shimer & Sons

Milton, Pa., U. S. A.

Galt, Ontario, Can.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24

RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22

SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22

BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23

PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 in.	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00	55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00	40 00	

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00	1 1/2-in. spruce laths	4 40
Barn Boards, No. 1, 1 x 12	48 00	50 00	1 1/2-in. spruce laths	3 80
No. 1, 1 x 10	38 00			
No. 1, 1 x 8	37 00			
No. 2, 1 x 12	40 00	42 00		
No. 2, 1 x 10	35 00	36 00		
No. 2, 1 x 8	34 00	35 00		
No. 3, 1 x 12	32 00	33 00		
No. 3, 1 x 10	29 00	30 00		
No. 3, 1 x 8	29 00	30 00		
Canadian spruce boards	25 00			
Spruce, 10 in. dimension	28 00			
Spruce, 12 in. dimension	29 00			
Spruce, 9 in. and under dimen.	26 00			
Spruce, 8 in. and under dimen.	25 00			
10 and 12 in. random lengths, 10 ft. and up	26 00			
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00		
All other random lengths, 7-in. and under, 10 ft. and up	21 00	21 50		
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00			
1 x 2 and 1 x 8 furring, p 1s clipped and bundled	23 00			

1 1/2-in. spruce laths	4 40
1 1/2-in. spruce laths	3 80

New Brunswick Cedar Shingles	
Extras	3 65
Clears	3 35
Second clears	3 00
Clear whites	2 65
Extra 1s (Clear whites out)	1 50
Extra 1s (Clear whites in)	1 00
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 65
Red Cedar Eureka, 18-inch 5 butts to 2-in.	4 25
Red Cedar Perfection, 5 butts to 2 1/4	4 80
Washington 16-in. 5 butts to 2-in. extra red clear	3 50
The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 8/16-in. 8-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 8-ply maple, sanded one side 4 c. per ft. All F.O.B. Jamestown, New York.	

Cling-Surface Does It.

The belt in this photograph is 3-ply; it is transmitting 220 horse power; is under a tension of over 1445 pounds on the pulling side; and yet THE TOP SIDE RUNS SLACK.

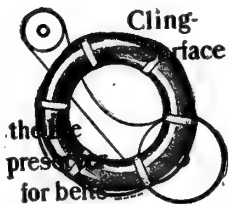


When this belt was photographed (in the plant of the Wilkes-Barre Light Co., Wilkes-Barre, Pa.), it was pulling 220 horse power. Looks as though it were pulling nothing, doesn't it? Increase the load to 268 h.p., the rated capacity of the generator, or even higher, and it will act equally well—Makes no difference to a Cling-Surface-treated belt—the greater the load the further it lies down on the pulley and pulls, for it is the contact that counts. Treated with Cling-Surface a belt can't slip, especially if it is provided with a fairly liberal arc of pulley contact as above.

The belt isn't made the least bit sticky, but rendered pliable and slipless by the penetrating and lubricating action of Cling-Surface.

But coming back to the Wilkes-Barre plant above, the speed of the fly wheel is 240 r.p.m. and its diameter is 80 inches. The generator is 200 kw., 3-phase, 2300 volt, 60 cycle, and its pulley is 32 inches in diameter. Distance between centres, 24 ft. When the belt was new it was not treated for three months. It became oily and dirty and began slipping. Even the tightener would not prevent slip. Then Cling-Surface treatment began, and they write, "Followed Cling-Surface instructions on first application and since then gave an occasional application with brush. Result—no trouble whatever on account of belting." We have thousands of installations doing equally well.

Send your trial order now. We quote f.o.b. Toronto.



Cling Surface Co

1021 Niagara St Buffalo N Y

New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 76

WHY?

Pay for Bags, Sacking, Freight, Handling, Cadging on light dirty oats, when the above items of cost are the same on

Heavy, Clean, "National" Oats

purchased direct from producers and shipped from our elevators in the heart of the best oat sections of the Western Provinces.

Write or wire for quotations

National Elevator Company, Limited

WINNIPEG, MANITOBA

Port Arthur, Ont.

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What a Test Proved



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs. (See how this Chain stretched before breaking.)

"Ajax" Loading Chain is made from special steel of highest tensile strength and toughest wearing qualities. Every link of "Ajax" Chain inspected before shipment, and every weld guaranteed perfect.

GET OUR PRICES AND PARTICULARS

Standard Chain Company
Pittsburgh, Pa.

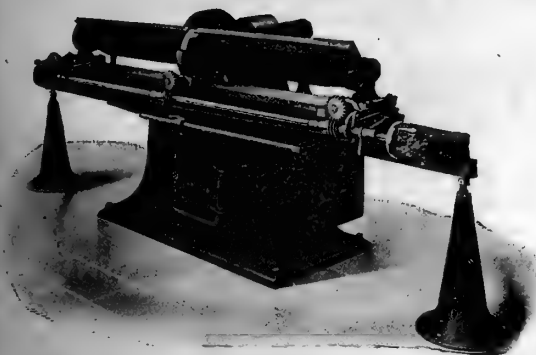
The World's Largest Chain Producers.

Montreal: Alexander Gibb, St. Nicholas Bldg.

Winnipeg: Bissett & Loucks.

Vancouver: John Burns, 329 Railway St.

AUTOMATIC FEED KNIFE GRINDER



Type "B," range from 51" to 130". Price—From \$220 to \$395.

This cut represents one type only of our line of automatic knife grinders. We make all sizes from a small \$65 bench grinder to a 130 in. machine.

We also manufacture a complete line of automatic

Saw Sharpeners

for both circular and band saws.

No mill is complete without one or more of the Rogers-Buffalo Machines.

Send for our catalogue—it is free on request.

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.

Dixon's Graphite Axle Grease

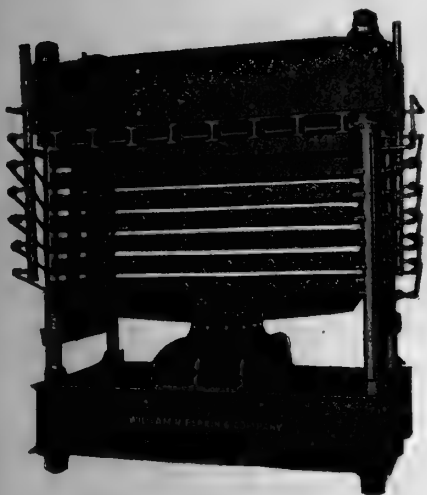


One application of this grease will last two or three times as long as any other grease. That means a saving of grease and time and trouble. The Dixon's Flake Graphite in the grease is the secret of its lasting qualities. Send for sample and Booklet No. 238.

Made in JERSEY CITY, N. J. by the

Joseph Dixon Crucible Company

Established 1827



Veneer Press and Dryer

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

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WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

The Laidlaw Bale-Tie Co., Limited

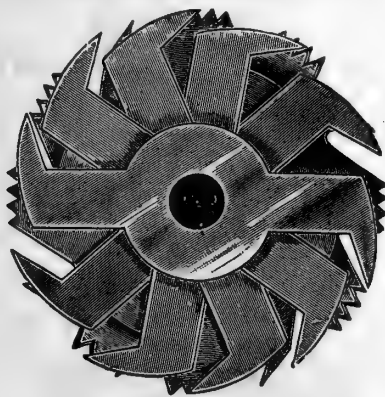
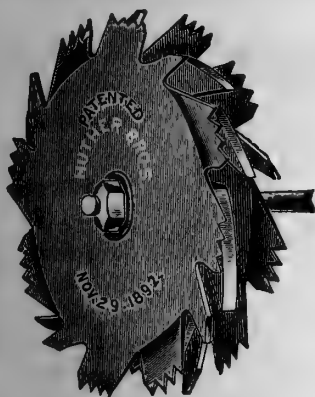
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Harry F. Moulden & Son

HAMILTON,
ONTARIO

Vancouver
George W. Laidlaw

HUTHER BROS. PATENT GROOVER OR DADO HEAD

For cutting any width groove from one quarter inch to 2 inches or over



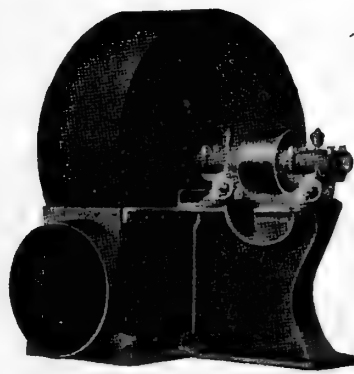
Can be used on any Circular Saw Material. Will cut a perfect groove with or across the grain. This is the only Dado Head on the market that gives entire satisfaction on all classes of work. No screw adjustment. For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of wood working machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense.

HUTHER BROS., SAW MFG. CO., Inc., 1103 University Ave., ROCHESTER, N. Y., manufacturer

Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.

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System in your Planing Mill



Fifty per cent. higher efficiency than any other on the market to-day, uses 1/3 less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

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Griplock Riveted Chain Belt



Section of Griplock Riveted

No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis., a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

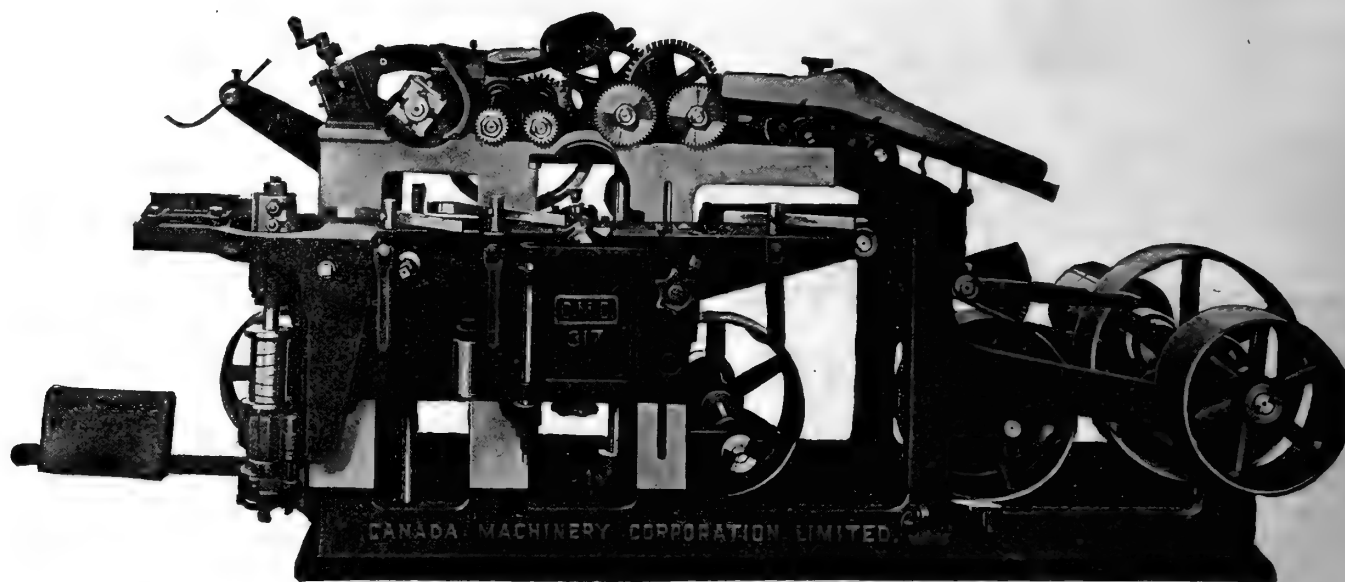
We would be very glad to mail you sample links for your inspection.

Sold by **The A. M. ELLICOTT CO., Montreal, Que.**
Elevating, Conveying and Transmission of all kinds a specialty

SASH



STICKER



No. 317 Sash Sticker With Boring and Grooving Attachment

A very convenient sticker for sash factories.

For making stiles, bars and mullions in one operation.

Supplied with or without boring and grooving attachment.

This machine is strongly built throughout and the feed is by four corrugated rolls.

The parts are all readily accessible; all adjustments being made from the working side of the machine.

Bulletin No. 317 particularly describing this machine sent on request.

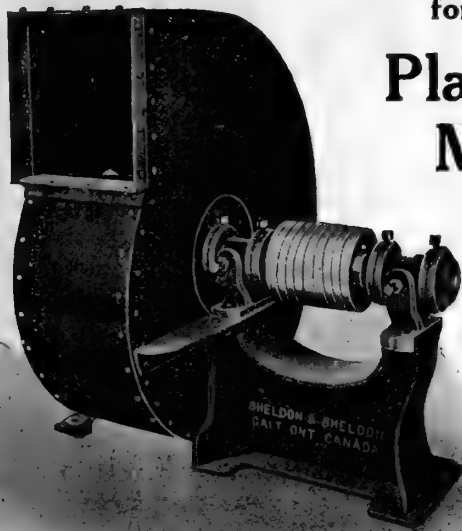
Our moulder catalogue describing the complete line of moulders we build, to be had for the asking.

Canada Machinery Corporation, Limited
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Largest Builders of Wood-Working Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
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10 The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

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WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

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Shiplap
Box Lumber

from cants and fitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES —taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbing (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."

Wickes Brothers

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Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

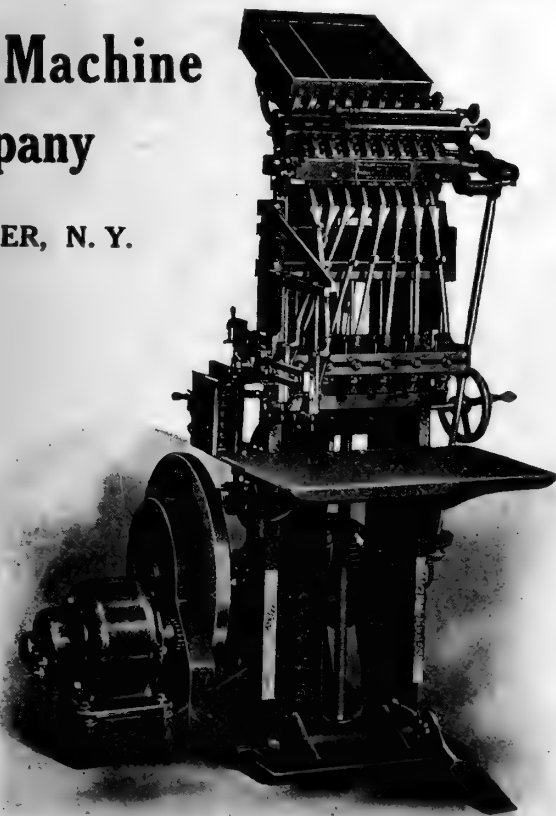
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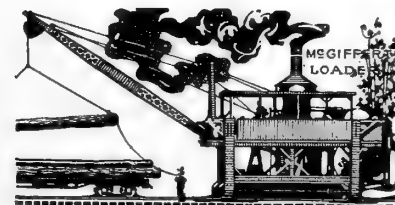
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Matchers,

Box Board
Printing
Machines.

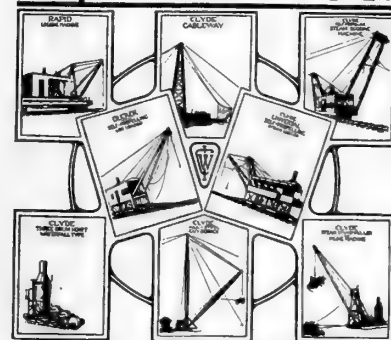


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.



Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

Size "S" Single Mill with 16-foot Carriage

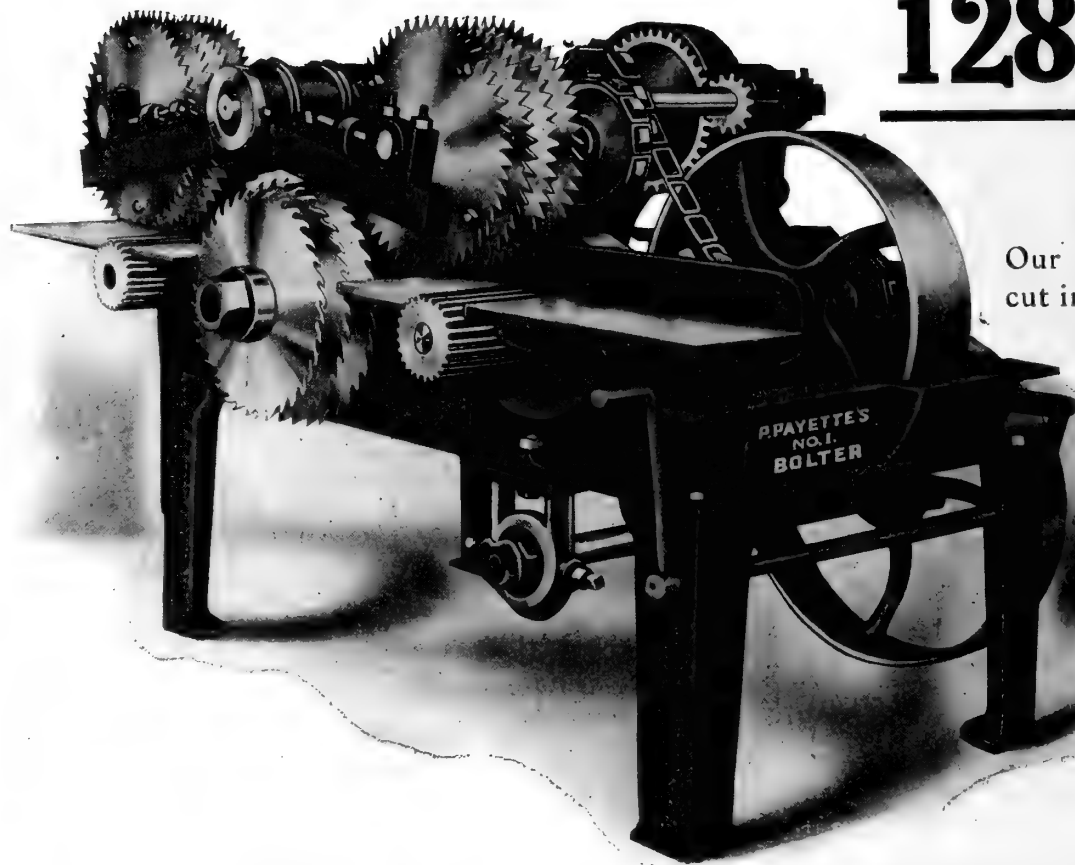
Size Husk 3 feet by 6 feet 3 inches
Diameter and Length Mandrel . 2 3/16 by 55 inches
Size Drive Pulley 20 by 10 inches
Feed per Revolution of Saw 0 to 3/4 inches
Feed Belt 4-inch Gandy
Largest Diameter Saw 56 inches
Length of Carriages 12, 16, 20 or 24 feet

Width of Carriages 33 inches
Trucks 7-inch wheels and 1 1/4-inch axles
Length Track 32, 40, 48 or 56 feet
Style and Opening of Blocks C1-36 inches
Style Mill Dogs Pony Excelsior
Style Set Works No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C.. E. Long Mfg. Co., Orillia, Ont.



128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1 1/2 in. by 3/8 in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.


A Few of the "400" who use Payette's Lath-Machinery :

Graves, Bigwood Co., Byng Inlet, Ont.
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Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.

P. Payette & Company,

Engineers and Machinists

PENETANGUSHENE, ONT.



On Berlin Band Sawing Machinery Are Improvements That Cannot Be Bought Elsewhere at any Price.

WHY BERLIN RESAWS ASSURE LARGER PROFITS

Which kind of a resaw are you operating? A built-for-service resaw that starts readily at 7 o'clock and consistently produces at fast feeds all day? Or one that produces at slow feeds, lacks efficient saw protection, feeding power and convenience of operation?

We want to prove to you that Berlin built-for-service Resaws are the most efficient Band Sawing machines in the World. They are better constructed, better designed. Berlin Resaws assure larger profits because they embody improvements and labor-saving operating devices you cannot buy elsewhere at any price.

Mill men who have used other resaws, now using Berlin, tell us that Berlin Resaws do more and better work, are more easily operated, give less trouble and require less power. Blades on Berlin Resaws endure longer runs at fast feeds, assuring larger profits, because the improved Berlin Knife-edge straining device renders constant efficient protection to the blades under all working conditions.

If you intend to modernize your equipment, or install another rip or resaw, it will pay you to investigate the efficiency and economy of Berlin Band Sawing machinery. There's a Berlin Band for every purpose; for whatever rip or resawing you wish to do. And the Berlin best adapted to your work will do it at the lowest possible cost to you.

Berlin No. 342 Short-Saw Sawmill Resaw

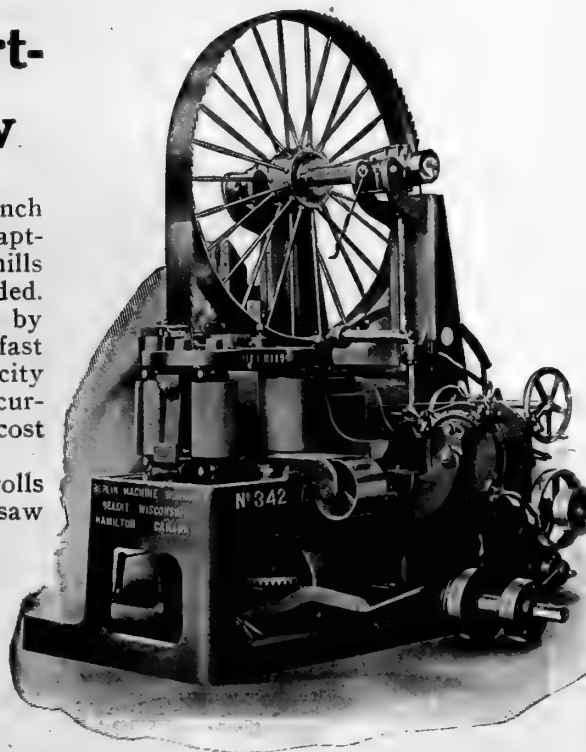
This close-coupled resaw, carrying 64-inch wheels, 8-inch 18-gauge saws, is especially adapted for heavy service in sawmills and planing mills where accurate, fast-feed resawing is demanded.

The short, stiff blade, efficiently protected by our sensitive knife-edge straining device, is fast and stiff in the cut. The "342" has large capacity and powerful feed, and will manufacture accurately sawn lumber from cants and planks at cost that assures profit.

The large-diameter, powerfully-driven rolls open 8-in. inside and 14-in. outside of the saw line. Roll setting with our Pilot Wheel set works is quick and accurate. The variable speed device provides eight speeds of feed from 30 to 200 feet per minute; a range of feed covering every need.

Let us send you complete information regarding the No. 342 and other equally efficient Berlin Resaws. The Band Saw Book illustrates and describes the line complete. We'll present you a copy free, if you'll accept it.

Request It on Your Letterhead.

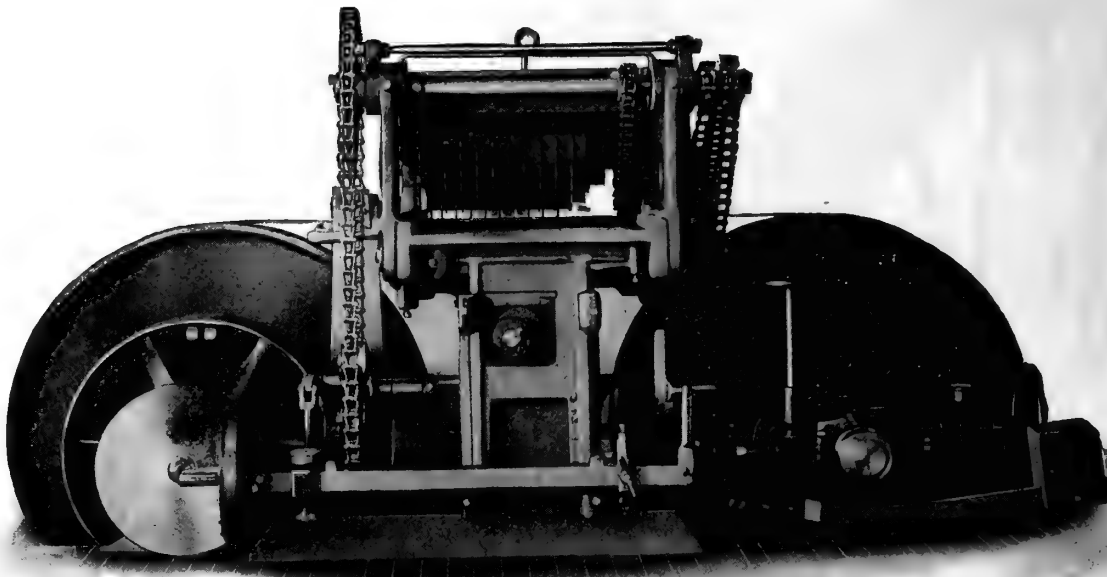


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Largest Manufacturers of Woodworking Machinery in the World

United States Plant

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Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

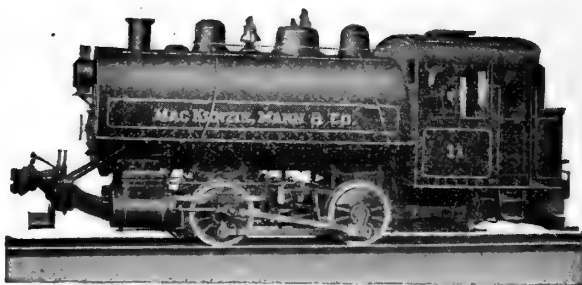
One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

LOGGING LOCOMOTIVES



The locomotive illustrated was built for MacKenzie, Mann & Co., Contractors, Montreal, Canada, and represents the latest development in this type of locomotive.

It is suitable for logging contractors, quarries, mines and industrial service. It will haul 1,875 tons on level, and 160 tons on 3 per cent. grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

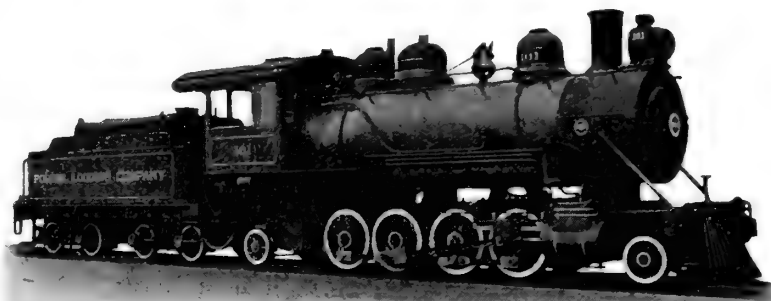
Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**Economy in Logging Operations**

Fifty years experience has taught us how to build logging and industrial locomotives that will give the greatest amount of power for the lowest fuel consumption.

The simple and sturdy construction of our locomotives is also a notable feature. They are easy to control and economical in repair.

Our Logging and Industrial Locomotives are specially designed to meet the conditions under which they are expected to operate.

We are also builders of stationary boilers suitable for contractors and industrial plants. **Send for specifications.**

Canadian Locomotive Company, Limited, Kingston, Ont.

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

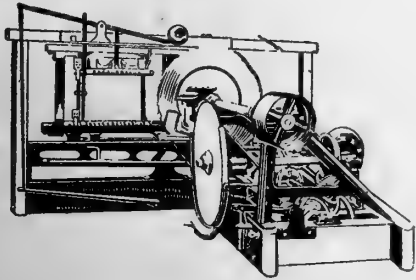
Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

The Pioneers

We alone manufacture the Genuine "DUNBAR" Shingle Machines—other machines advertised as such are imitations.



Operating our "Dunbar" Shingle Machine one man will joint and sort from 16 to 45 thousand shingles in a day of 10 hours. Good shingles too.

We are Canada's Pioneer Shingle Machine Manufacturers, and we respectfully solicit correspondence from lumber manufacturers.

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Successors to McFarlane, Thompson & Anderson Mfg. Co.

Fredericton, N. B.

Hoisting Engines



A strongly constructed and powerful machine with every attachment and convenience necessary for a complete hoisting or contractor's outfit.

Built in all sizes

Particulars and prices on request.

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Works Ltd.

Chatham,
N. B.

THE PETER GERLACH CO.
MANUFACTURERS
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SAWS
CIRCULAR AND CYLINDER
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OUR SPECIALTY

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"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the "Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

Send for Bulletin No. 4

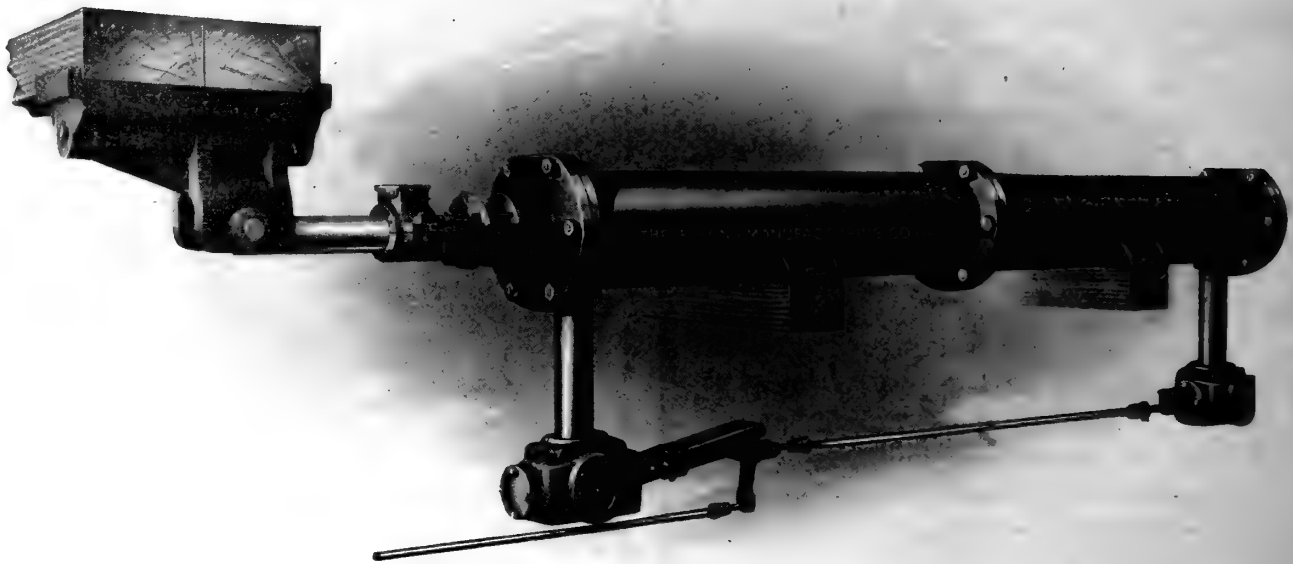
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Cut Your Cutting Cost



DIRECT ACTING STEAM FEED
WITH MODEL "D" VALVES

A STEAM FEED, especially when fitted with our model "D" valves, is such a great time saver over a friction feed that it will make an enormous increase in your lumber production, with no additional labor.

Do not decide that your boiler capacity is too small until you have consulted our engineering department. The power required by our feeds is surprisingly small, and we will **guarantee results** on any installation.

We make these feeds in all sizes, including one for **your** requirements.

SHALL WE SEND OUR BULLETIN? IT'S WORTH WHILE.

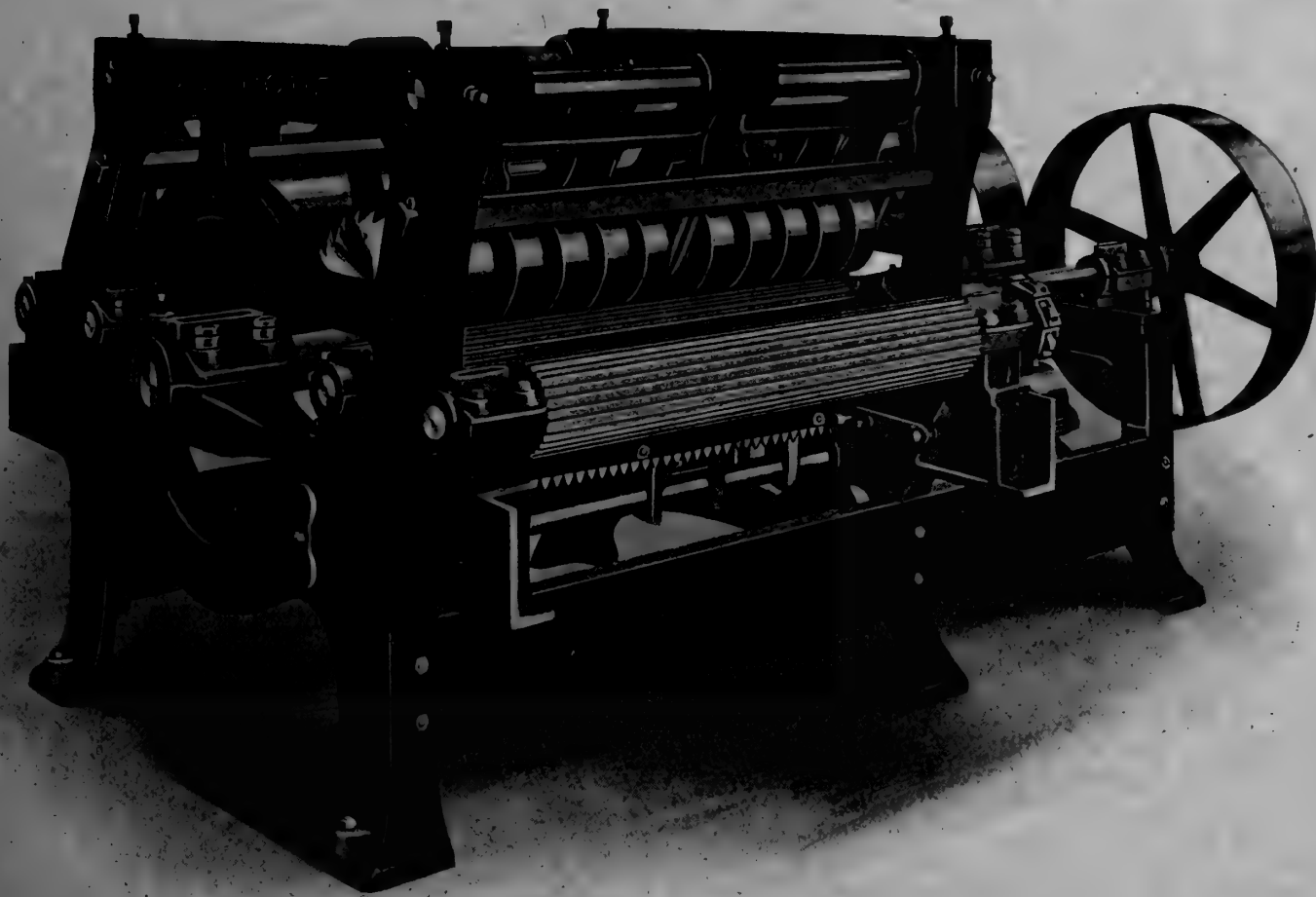
The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver
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Represented by:

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An Edger That Is Better



The Waterous New Champion Edger

**Built with 40 in., 48 in. and 56 in. edger opening,
carries 22 in. saws, will take cants up to 6 in. thick.**

You will not find an Edger anywhere that combines as many advantages as this one. It has all the good points you look for, and then some.

In the first place, it is roomy and open to let lots of light into the working space so that you can get a clear view of the stock as it passes through the saws.

The frame is rigid and sturdy, with the weight carried low, the shaft of large diameter, the bearings long. Every part that has work to do is provided with posi-

tive easily reached adjustments for taking up wear.

The saw guides, perfectly rigid when set, shift easily and positively to correct cutting position. Feed rolls are power driven, press rolls swing with the feed. There is no fear that the stock will jam in the rolls or that a 6" cant will not go through the saws.

The fastest mills in Canada are using the New Champion Edger with splendid results on all kinds of timber. It is built to stand up to hard work—will take all you can give it and ask for more.

Let us tell you more about it in the catalogue—No. 113. A post card will do.

The Waterous Engine Works Co., Ltd.

H. B. Gilmour, Vancouver, B.C.

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Branch—Winnipeg, Man.



"FROST KING" METAL

\$5,000,000.00
worth of mixed metal
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Our thirty five years experience in metal mixing enables us to place on the market a babbit that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

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Staved Columns
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THE
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THAT'S
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Exhaust System in mill of W. C. Edwards & Co., Limited. Largest Shavings and Sawdust System in Ontario. Designed and put in operation by our engineer.

Save the wear on your machinery Reduce your Fire Risk Increase the Efficiency of your Plant by installing our

IMPROVED SLOW SPEED LOW POWER BLOWER SYSTEMS

For Shavings, Sawdust and Dust

Improved Low Pressure Dust Separators. Automatic Furnace Feeders.

Why speculate, when people who know how are at your service. Our systems are the most efficient and economical to operate. Write and our Engineer will call.

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Time is Money

The rapid cutting File is the economical File

Files Branded

American - Arcade - Eagle - Great Western
Globe - Kearney & Foot - McClellan - J. B. Smith

are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.

Dread-
nought
Brand



Dread-
nought
Brand

Electric Welded Steel Loading Chain

SIZE	LBS. FT.	PROOF TEST	BREAKING TEST	WT. 100 FT.
7/32	16	2200 lb.	4500 lb.	60 lb.
1/4	14	2500 lb.	5000 lb.	80 lb.
9/32	13	3500 lb.	7000 lb.	90 lb.
5/16	12	4500 lb.	9000 lb.	110 lb.

Guaranteed to pull stiff before breaking

McKINNON CHAIN CO., ST. CATHARINES, ONT.



STRONG GRIPPING POWER

One of the characteristic features of Dick's Belting is the strong gripping power, which ensures the transmission, positively without loss, of the whole power given off by the engine. The entire absence of stretching or slipping is another important quality Dick's Belts possess. It will pay you to investigate these belts before buying any other make.

Get a copy of Catalog No. 17.

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The Belt that will last longer, stretch less,
and transmit more power than any other belt.

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER

Before you buy your Pumping Machinery
write us for our catalogue, covering
Steam and Power Pumps



**The Smart-Turner
Machine Co., Ltd.**

Hamilton, Canada

THE STRONGEST CHAIN IN THE WORLD

**"Weldless
Steel Chain"**



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

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WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

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MONTREAL

Midland Planing Mill Products

THE LEADING STOCK LINES



Our New Catalogues for 1914
Will be sent upon request. Write for Discounts.

WE ANNOUNCE

THE FIR DOOR

This door, lately introduced from the West, is justly popular because of its adaptability for a variety of oil finishes. It matches Georgia pine trim perfectly, and can be stained to match various hardwoods, Chestnut, Oak, Ash, etc.

We believe that the Fir Door is going to be "The Door." In line with our policy of Progress, we manufacture it, and are the first Eastern firm to do so. We lead,—watch the others follow us.

This places the Fir Door within reach of all consumers in the East, as we carry a large stock in fourteen different stock sizes, and can make odd sizes for prompt delivery at short notice.

Our new Door Catalogue gives full particulars.

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company

CACHE BAY Limited - - ONTARIO

Manufacturers of

**Lumber, Lath and
Dimension Timber
Planing Mill
Dry Kiln**

FOR SALE

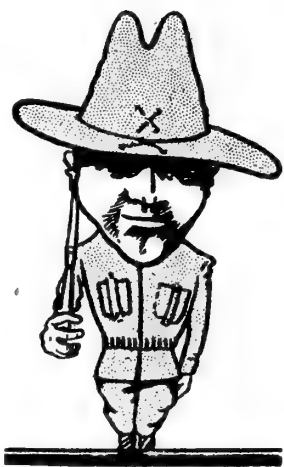
All Dry Stock

1	Car	5/4 x 4 & up x 6/11	Shipping	Cull	White	Pine
2	"	5/4 x 4 x 10/16	"	"	"	"
2	"	5/4 x 5 x 10/16	"	"	"	"
4	"	5/4 x 6 x 10/16	"	"	"	"
4	"	5/4 x 7 x 10/16	"	"	"	"
2	"	5/4 x 8 x 12/16	"	"	"	"
1	"	6/4 x 4/7 x 10/16	"	"	"	"
4	"	6/4 x 8 x 12/16	"	"	"	"
4	"	2 x 4/7 x 12/16	"	"	"	"
4	"	2 x 8 x 12/16	"	"	"	"
1	"	5/4 x 8 & up x 10/16		Box	White	Pine
1	"	2 x 12 x 10/16	Mill	Cull	White	Pine
2	"	6/4 x 6 & up x 12/16	No. 1, 2 & 3 Cuts	White	Pine	

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The Colonial Lumber Co., Ltd.

Pembroke, Ontario



Guard Your Future Sales

By selling

HOCKEN'S

Hemlock Pine and Hardwoods

Our mill is running day and night so if you want special bills in a hurry---send us your list

Hocken Lumber Company, Limited

Otter Lake Station, Ont.



Write for Prices

On the following Stock

10 Cars	1 x 4 & 5	No. 1 Spruce Dressed 2 S & C.M.
300,000	2 x 4	" 10/16 piled separately
100,000	1 x 4	C. & B. Red Pine Strips.
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In Transit

5 Cars B. & B. Steam Dried Short Leaf Yellow Pine Finish.
 1 x 6 to 12" equal proportions of each width.
 5 Cars 3 X B. C. Shingles A. Cotton Brand.

The Long Lumber Co.

Hamilton, Ont.




Canada Lumber Sales Co., Limited

want to buy

BASSWOOD

20 cars 4 1/4" x 3" and up random length
 8 " 5 1/4" x 6" " "
 8 " 6 1/4" x 6" " " random length
 winter sawn, white stock. Delivery May
 and June. We are also open to buy
 Hemlock and Spruce boards—any quantity.

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Yellow Pine Timber

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 Car Material and Long Timbers
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Lisman,
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JOHN M. DIVER

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"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow
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Cedar Telegraph and Electric Railway Poles 20 to 80 ft.

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Timber for R. R. Construction and
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Long Leaf Timbers,
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PINE**

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White Pine, Birch, Spruce and Hemlock

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Nice Line 1 x 4 and up—6/11 Moulding White Pine.

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250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

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Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**

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Chatham, New Brunswick, Canada



View of yard and mill—J. B. Snowball Co., Ltd., Chatham, N.B.

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**Spruce, Pine, Hemlock, Hardwood, Lumber,
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We solicit your enquiries.

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Agents for Ontario **R. Laidlaw Lumber Co., Limited**
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The rates are most reasonable, write us.

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13 Foot and 16 Foot

Lath and
White Cedar Shingles

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JOHN P. NEWMAN

Saw Mill and Novelty Works. All
kinds of Hard and Softwood Lumber.
Dimension Stock in Beech, Maple and
Birch. Mattress and Cot Frames, Etc.
*Send me your requirements, I can furnish
you stock that will please.*

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White Pine, Norway Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and
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Yellow Pine Timber a Specialty,
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

Hardwood Flooring

The Celebrated Diamond Brand

End Matched, Bored,
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Manufactured by
SIEMON BROS., LTD.

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Portable
CLOCKS**

We are the only MANUFACTURERS
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We are in the market for the
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**White and Red Pine
Spruce, Jack Pine
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also the output of mills manu-
facturing any or all kinds of
Canadian Hardwoods — Write
us at once. Will pay the high-
est cash prices and ship stocks
out promptly. We are buying
now our 1914 stocks. Write
us giving list of lumber you
have or amount you expect to
have this season.

**C. G. Anderson Lumber
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Manufacturers and Strictly Wholesale
Dealers in Lumber

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2,500 "	16/4	" " "
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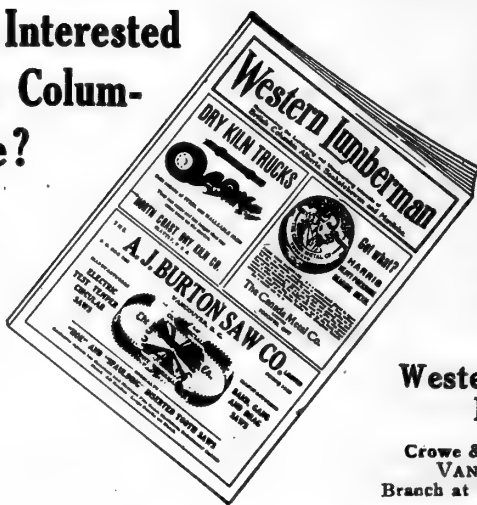
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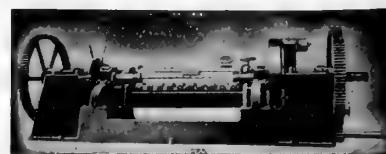
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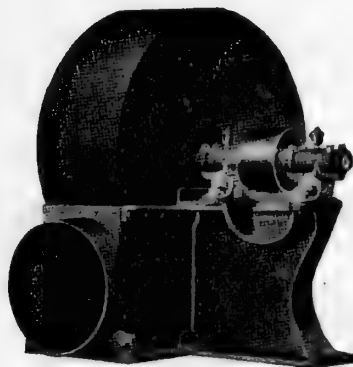
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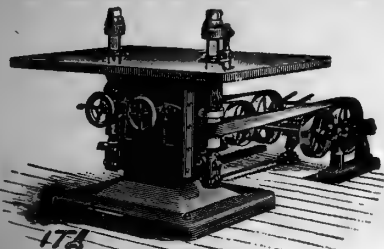


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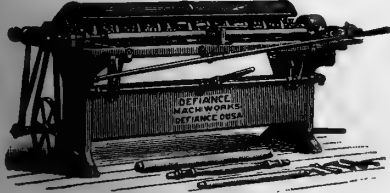
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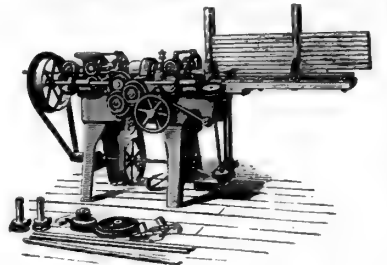
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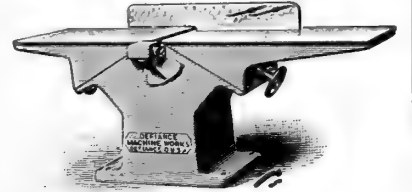
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Manufactured in Ottawa by the
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We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 16-ft. Slash table. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |
| | 1 24 x 36 Slide Valve Engine with 40-in. x 12-ft. extra heavy double arm split fly wheel. |
| | 2 Double Duplex, high pressure Water Pumps. |
| | 5 60-in. x 10-ft. Return Tubular Boilers, allowed 125 lbs. steam. |
| | 2 125 h.p. Water Wheels. |
| | 1 Upright Engine for sawdust conveyor. |
| | 1 10 h.p. Engine. |
| | 1 Mitts & Merrell Hog. |
| | 1 Wood Machine for 22-in. wood. |
| | 1 Wood Machine for 16-in. wood. |
| | 1 Edger for ripping dry lumber, installed. |
| | 1 Edger for ripping dry lumber, not installed. |
| | 1 30 h.p. Generator, 250 volt. |
| | 1 30 light arc generator. |

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| 1 Automatic Filing Machine for 12-in. D.C. band saws. |
| 1 Automatic Grinding Machine for 8-in. S.C. band saws. |

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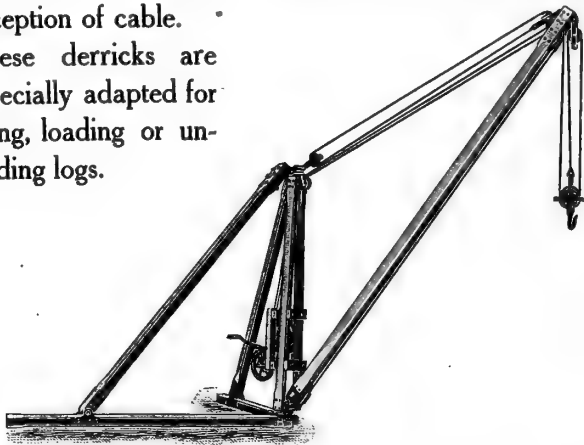
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Equipped with double drum winch for load and boom, also power.

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including all necessary blocks, ready for use with the exception of cable.

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4/4 Balsam

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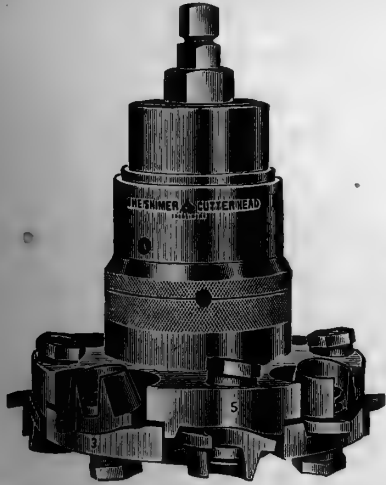
Woodmen, construction camp workers, sawmill hands and others whose work takes them into wet places and rough going, need footwear out of the ordinary.

We have been over thirty years making special footwear for such kinds of work. This line we put on the market under the name of

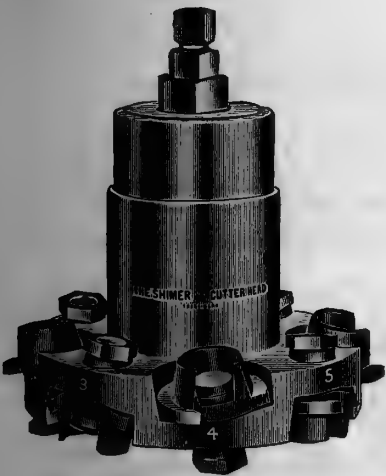
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The Shimer Limited, with Expansion, Fig. 628. Groove Head with 8 Bits and self-centering and spindle clamping features. Price \$36.23 each, complete.



The Shimer Limited in solid section, Fig. 625. Groove Head with 8 Bits and the self-centering and spindle clamping features. Price \$33.50 each, complete.

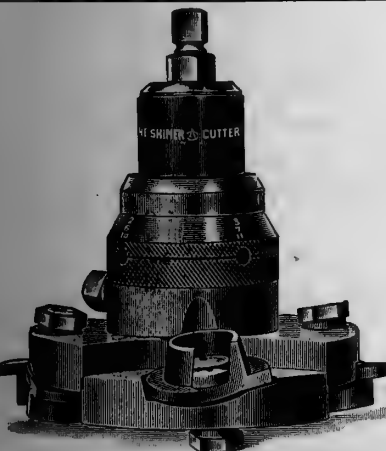
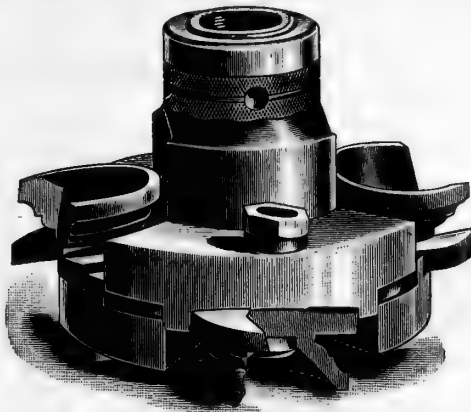


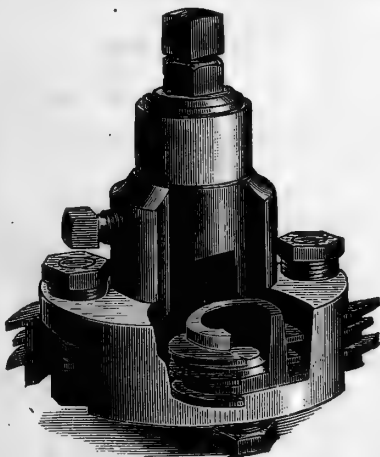
Fig. 203, Popular Expansion Groove Head with 4 bit seats, complete, net \$20.48. Made also with 6 and 8 Bits to each Head.

The Shimer Door and Sash Heads



Save the filing to shape at each sharpening of the cutters. They are made per order, carry in their outline the perfect counterpart of the work, thus by simply filing the Bits and setting them to the gauge the fitting of the manufactured parts is assured.

A solid Door Head with Bits to work 1 to 1 1/4 inch Doors costs only \$18.03, and an Expansion Head only \$20.63. A solid Sash Head to mould 1 to 1 1/4 inch Sash, complete with Bits, costs only \$16.91—an Expansion Head fitted out complete only \$19.51. \$62.87 will give you an excellent solid section outfit, including Door Cope Heads and Sash Cope Heads. If you want the very best with Expansion the cost will be only \$68.07.



Double the Capacity of Your Matcher or Moulder By the use of the Shimer Double Ceiling and Double Flooring Heads.

Run your stock with double tongue and groove and then re-saw. 100 per cent gain in output for an investment of only \$40.94 and upwards.

The Bits on the Shimer Double Heads mark the saw cut line of division on the stock so that the sawyer can at once detect any variation of the saw and correct it as the board is passing through.

These Heads are not an experiment. We have made them for years and they are in daily use in the best mills of this and other countries. You will find them very complete and practical tools, carrying the Shimer guarantee to do as represented or no sale.

Heads for making Ship Lap

The Shimer Cutter Heads for Ship Lap are so proportioned in the Bits and their seats that a perfect draw cut is made. They work interchangeably with our matcher Heads and always produce good work.

Price, per set, complete, \$33.64 to \$38.48, according to thickness of cut.

Extra Bits for making Wainscoting on these Heads \$1.95 each.

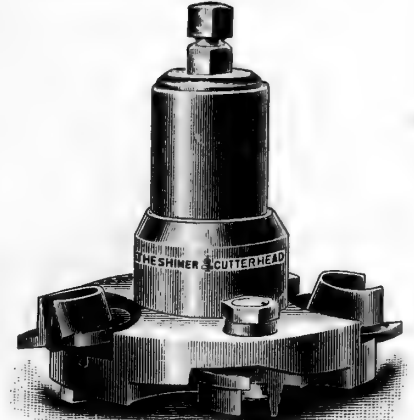
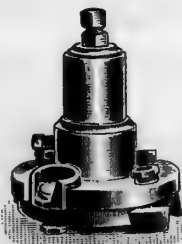
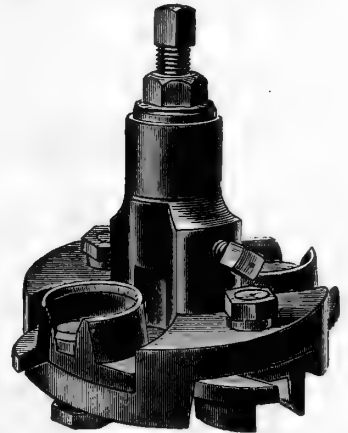
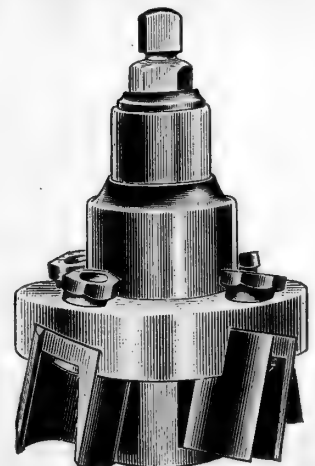


Fig. 23, a Popular Solid Groove Head with 4 bit seats, complete, \$17.87. Also made with 6 or 8 Bits to each Head.



Groove Head, Fig. 2. For plain matching or tongue and groove joint, complete with Bits, \$13.00.



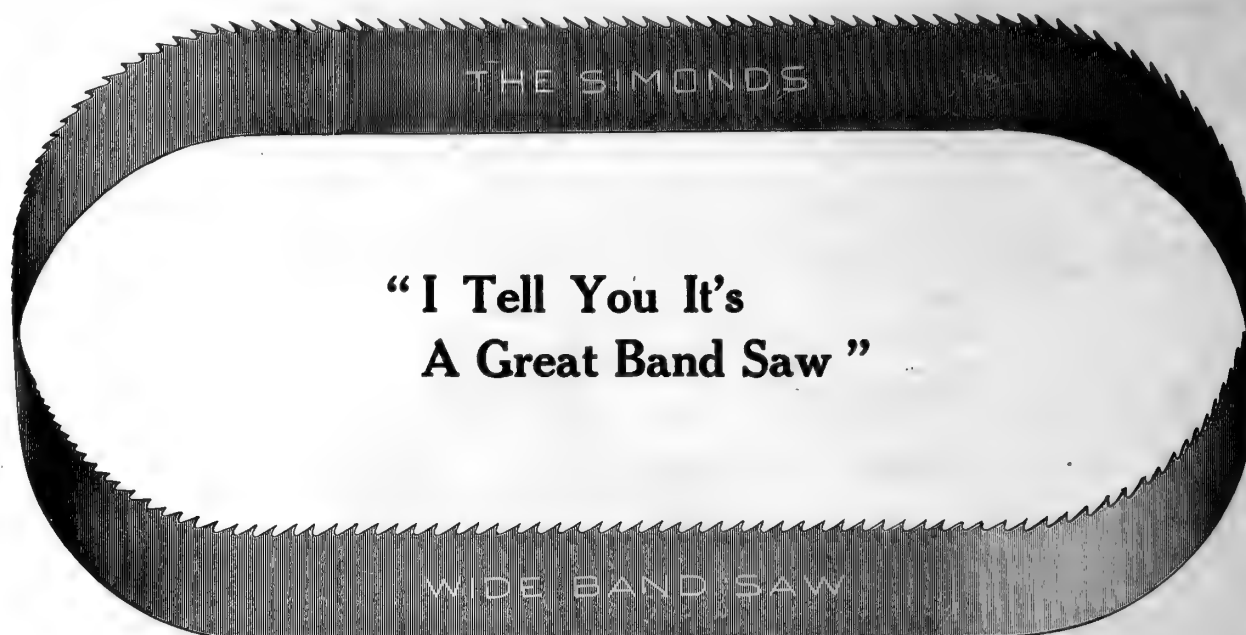
Jointer Head, Fig. 55, with 4 Bits in line of work. Also made with 6 and 8 Bits to each Head. With 4 Bits \$16.64.

Our Bedee Knives, recommended by users as the best thin steel knives on the market, can be furnished in any length or thickness on short notice. Write us about your requirements.

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Canada Lumberman & Wood Worker

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, April 1, 1914

No. 7

A Lumbermen's Club for Toronto

One of the most important events which has taken place for a long time in connection with the lumber industry in Toronto, was the formation, on March 13th, of a Toronto Lumbermen's Club. From the attendance at the meeting at which the organization was formed, and the enthusiasm of those present, it becomes a matter of wonder why a club of this nature was not formed at a much earlier date. The idea of such a club has been discussed from time to time by several members of the trade, and the meeting which resulted in its organization was really called for the sole purpose of discussing the matter, with a view to bringing it definitely before the trade and preparing the way for organizing it at a later date, if found advisable. That the members of the trade who were present should not only have favored the proposal, but have acted immediately upon it, is a most encouraging augury for the success of the club. No detailed explanation of such a club is necessary. Its principles are well understood as they have been put into practice in connection with many other industries and trades. Briefly speaking, a club will provide a place of social intercourse for members of the trade, where they can meet and have lunch, or where they can make engagements to meet one another for the discussion of business. It is possible, and even probable that the value of the club will be so clearly apparent from the first, that its activities will be increased so as to make it additionally useful to the trade in a number of other directions. With such a club in existence, affording a central place of meeting, results ought to be seen at an early date, in the way of an improvement in the general conditions surrounding business affairs. There is no reason for instance, why every member of the lumber trade in Toronto should not be on close terms of acquaintance with every other member. One would think that this would already be the case, yet the Canada Lumberman has frequently seen that it is not so, even in cases where firms, still unacquainted with one another, might have done much mutually

profitable business. An example of this was afforded at the very meeting at which the club was organized. A prominent wholesaler and a very large consumer of lumber came to the meeting and were introduced to one another, for the first time. The surprising thing was that they had not formerly become acquainted, although their offices are both in the same building. With a lumbermen's club in existence and every member of the trade taking an interest in it, such a thing would quickly become impossible.

Growing out of the better acquaintance with one another which such a club will develop, will come a better general trade relationship. It is not so very long ago since one heard far too many complaints from retailers in regard to the treatment they received from wholesalers and manufacturers, and at the same time one heard far too many complaints from wholesalers and manufacturers to the effect that retailers were too often in the habit of "kicking on principle" in the hope of securing price concessions to which they were not entitled. These complaints have not disappeared entirely, although fortunately, they are far fewer than they were a few years ago. The members of the trade have unquestionably come closer together in their relationships with one another of late years, and a great deal of good has resulted. There is, in fact, a fine feeling of business trust among the chief members of the trade in Toronto, but there is room for still further development along this line and the club will provide the most natural means towards this end. The fact that this improvement in trade relationship has occurred is directly responsible for the organization of the club. Members have come to know one another well enough to feel that they would like to sit down with one another at a meal, and to meet, not only in a business way, but in a business and social way combined.

The success of the club will depend largely upon the manner in which the members of the trade support it at the outset. It is a movement in their own interests which can be made just as useful as they desire to make it. The way in which those who were present at organization meeting, took hold of it, makes the chances strongly in favor of success. The details of the organization have yet to be worked out. Quarters have to be secured and members have to be enrolled. Two committees have been formed to attend to these matters. So far as quarters are concerned, it is likely that they will not present any difficulty. The membership question rests entirely with the lumbermen themselves. Their response to the request to join will give an early indication of the results to be expected. Prominent members of the trade are in charge of this matter and will call upon every member to enlist their assistance. Those who organized the club felt that there would be little difficulty in securing membership from practically every member of the trade in Toronto. It looks, therefore, as if the club will soon be an active factor in lumber trade life in Toronto, and it cannot then help being an important factor also in the lumber trade affairs of the whole province, as members of the trade from outside points will quickly become acquainted with the club and its doings. The question has already come up, in fact, how outside members shall be admitted. It is probable that they will be admitted at a reduced fee and that in this way the influence of the club will soon be felt in all parts of the country where lumbermen are interested in the Toronto market.

Reliable Information a Valuable Asset

Reliable information regarding customers and their requirements is the best foundation for business success. Upon it depends not only the extent of the business secured, but also its profitability. When one has at his finger ends information as to the exact class of material required by an important customer, and when that customer is found to be coming into the market with requirements for an important order, the chances are that this information regarding details will enable its possessor to secure the business. Everyone who is in the business of selling anything whatever, must pay attention to this elementary fact in order to succeed, yet it is strange how many opportunities for securing information of this nature are neglected even by the most up-to-date firms. There are some forms of business which depend entirely upon information of this nature and

which could not exist without it. A case in point is a general investment broker and promoter, who, when a young man, commenced to keep a scrapbook containing information about business opportunities of various kinds, devoting a good deal of attention to opportunities for investment in timber. This information was pasted away in index books and filed in cabinets. The result was that in the course of a few years it became a practical business directory containing information of the greatest value, thus enabling its owner to build up a unique and very successful business and to make himself and his services indispensable to a large number of wealthy clients.

Why should not this plan be adopted also in connection with the lumber selling business, both wholesale and retail? It is a simple matter involving merely the filing away and indexing of information which comes into one's possession in the course of daily transactions, and which, to many business men are in the habit of considering as valuable only in connection with the particular deal in regard to which it is secured. Such information, in many cases, is simply borne in mind for a time after the deal has been put through, and by the time it becomes valuable again, it has been lost. A scrapbook for such information, or a system of card files upon which it may be entered in abbreviated form is an easy matter to arrange and keep up. Its value is many times greater than the little trouble involved in its maintenance.

Apropos of such a plan, an instance illustrating it clearly is afforded by the case of a dealer who makes a specialty of lumber for mining purposes. Recently he received a requisition for timber from a large mining company, which, to the uninitiated contained such a mass of intricate details that it would be a very difficult matter to arrive at a safe estimate of the price of the material. But this particular dealer merely had to look up the information which he had on file and from it ascertained, at a glance, how much he could undertake to supply the material for. The result was a big order. The requisition was on a regular form and covered timber, lagging and wedges for 200 feet of main shaft. The information on file showed a

plan of a three compartment shaft, giving the net inside dimensions for each compartment, the depth of dado for end and cross sills, and notations giving the dimension and net length for each timber in the set. A list was also included giving the quantity and details of material required for 5 feet of main shaft. All this information had been secured in connection with previous orders, to obtain which, it had been necessary to expend a great deal of time, trouble and money in estimating upon individual items and running about to other dealers for material which was not in stock. Knowing thereafter just what this company required, and realizing that its business was worth being prepared for, the dealer with the information filed away is now able to quote on a requisition without a moment's delay. The order in question was for 200 feet of main shaft. The information showed how much was needed for five feet. The dealer merely had to multiply this by forty and send in his quotation. The whole transaction works like clock work and involves the least possible amount of expense. So successful was this plan that the dealer sent one of his best employees to visit all the other mining companies in the district for whom he could hope to furnish material, with instructions to secure similar information regarding them. He now has all this information filed away and the result, upon the volume of business secured, is surprising.

This plan, put into practice more generally would result in a revolution in many offices. It would do away with well-meaning but incompetent firms or individuals who rush after business, cut prices and bring about disaster to themselves and loss of business to others, simply because they are not furnished with the required facts that are essential to success. Greater competition would result if everyone followed the same plan, but it would be competition based upon knowledge. Even competition based upon knowledge of this sort, and carried on by individuals who may indulge in sharp practices, is preferable to the old-fashioned variety of competition based upon well-meaning ignorance. In other words a well-informed knave is a much safer competitor than an honest fool.

The Panama Canal and Lumber Prices

A great deal has been written of late about the effect which the Panama Canal will have upon the lumber trade of Canada and the United States. To the manufacturer upon the Pacific coast and the consumer in the east, this question is one of the greatest importance, and it will probably not be settled definitely until actual conditions have been worked out. The articles which have been published upon this subject, have, in many cases, taken either one side or the other of the question in a controversial manner. A very conservative estimate of the results of the opening of the canal, however, is contained in an article recently written by Mr. R. C. Bryant, professor of lumbering at Yale University, published in "American Forestry." In it, the writer expresses the opinion that the effect upon the lumber trade will be brought about slowly and that lumber from the Pacific coast will only take the place of the eastern and southern products, in measure as the supply of the latter dwindles; also that there will be no reduction in prices of lumber as a result of new competition, but a more gradual increase in prices than would have taken place without the influence of the canal. Professor Bryant's presentation of the case is, in part, as follows:

There are some who feel not only that the lower water rate which will prevail when the canal is open should permit Pacific coast operators to enter the eastern tidewater markets but who also foresee the possibility of delivering lumber, without rehandling, to canal boats at Albany, New York, at the terminus of the Erie Canal from which point it may be distributed to the large consuming districts tributary to it. This would not only open a large rural market in New York state but would permit them to invade the famous stronghold of eastern white pine, namely, the Tonawandas at the western end of the canal. By reloading at this point, lumber could be forwarded by an all-water route from Pacific coast points to the large lumber consuming centers on the Great Lakes, including Chicago, the largest lumber market in the United States.

That this dream of conquest will materialize in the next decade seems doubtful, although it may well come true when the supply of eastern woods is reduced.

The territory west of the Mississippi river is the fighting ground of the yellow pine and Douglas fir trade, with some competition in the north from white pine products. West of Denver the Pacific coast products have but little competition, but east to the Missouri river the competition grows more keen as the freight haul from the West increases. Beyond this point the territory is given over chiefly to southern yellow pine and to white pine.

Freight rates are the dominating factor in determining the territory in which a product can be sold profitably. As illustrating this, the rates for Douglas fir from Washington and on southern yellow pine from the South may be cited. The all-rail rate on fir products is 75 cents per 100 pounds from the Pacific coast to New York, which on flooring, per thousand board feet, amounts to approximately \$15, on dimension and common boards from \$18 to \$19.50, on timbers, not green about \$22.50, and on rough green lumber and timbers about \$24.75. The all-rail rate from points in Louisiana which ship yellow pine lumber to the same point as that mentioned for fir is 35 cents per 100 pounds, which is approximately \$7.75 per thousand board feet for longleaf pine flooring, \$9.50 on dimension and common boards, and \$15.75 on heavy timbers.

This gives the yellow pine manufacturers an advantage in freight rate alone of \$7.25 on flooring, from \$8.50 to \$10 on dimension and common boards, and \$9 on timbers. This handicap for fir timber is so great that only a very limited amount of the better grades can now be sent by the all-rail route.

Within the last year or two a very limited quantity of fir lumber has found its way into the eastern markets via the Isthmus of Panama, due to a combination rail and water rate from 40 to 50 cents per

100 pounds from Puget Sound points to New York. This rate was inaugurated by a steamship company operating on the Pacific coast. Lumber has been reshipped from the Atlantic seaboard as far west as Buffalo at a cost of \$125 per car less than it could have been sent by an all-rail route. The amount of lumber sent by the water route has been small because of the limited facilities available, so that this means of transport, has had no effect on transcontinental rail rates.

The question of what water rates will apply from the West Coast to the eastern seaboard, via the Panama canal, is yet undecided, but it has been estimated that American ships will charge from \$11 to \$12 per thousand board feet for this service. It is doubtful if the amount of lumber traffic through the canal from west to east will assume large proportions, at least for some time after the opening of the canal, because of the lack of suitable American bottoms in which to carry the product. While there are some new lumber carriers now under construction for the canal trade, the total carrying capacity will not be such as to make a very strong impression on eastern markets.

Another important factor is the lack of adequate lumber handling facilities at many of the Atlantic coast ports. A large part of the water shipments which now come both from Canada and from the yellow pine region of the South are in comparatively small cargoes made up of parcel lots which are delivered at various docks. The

lumber is also often in mixed lots destined for interior rail trade. Large vessels carrying cargoes of from four to six million feet, will find few ports where there are sufficiently large receiving yards to permit of the rapid unloading of the vessel, and there will be little encouragement for the owners of lumber carriers of large capacity to engage in lumber transport until this condition is remedied.

It is not to be expected that the opening of the Panama canal will either be a panacea for all of the troubles of the Coast lumbermen or the means of giving the people of the eastern part of the United States cheaper lumber, since it will take some years to build up a trade in western lumber and to develop shipping and terminal facilities so that the movement of large quantities of fir lumber will be possible. In the meantime the advancing price of stumpage and the reduction in the annual output of southern yellow pine, its greatest competitor, will have reduced competition and the territory now controlled by the pine manufacturers will gradually be absorbed by the Coast manufacturers without any marked reduction in lumber prices—probably at an increased price. We need not expect cheaper lumber on the eastern seaboard because of the opening of the canal but we may reasonably hope to have a more gradual increase in lumber values than we would be warranted in expecting if the products of the great forests of the west were not to be made available to us at a transportation cost much lower than now prevails.

Editorial Short Lengths for Busy Readers

The Board of United States general appraisers has sustained the protest of F. W. Myers and Company, of Burlington, Vt., holding that certain lumber, known as novelty siding, imported from Canada, is entitled to free entry under paragraph 647 of the Tariff Act. This is one of the first decisions in classification cases under the Underwood-Simmons law, to be handed down by the Board. The lumber in question was assessed for duty at 15 per cent. ad valorem under paragraph 176, providing for house or cabinet furniture, and manufactures of wood. The general appraiser, who wrote the decision, reversing the collector's assessment, said: "It is difficult to conjecture upon what theory the collector classified this lumber under paragraph 176."

According to opinions expressed by a number of British Columbia Shingle manufacturers, the removal of the duty upon Canadian shingles entering the United States has resulted in great increases in the exports of shingles to that country. It is reported that most of the shingle mills in British Columbia are shipping almost their entire output to the United States. One prominent shingle manufacturer states that 95 per cent. of the shingles now manufactured in British Columbia are crossing the border, and that the demand for these shingles in the United States has been gradually increased since the duty was removed. 80 per cent. of the shingle mills in British Columbia are now operating, according to this report, and the output is given preference in a great many parts of the United States. Under these conditions it is expected that the shingle trade during the coming summer will be very active. The invasion of British Columbia shingles has not been received with any pleasure by shingle manufacturers in the State of Washington. One British Columbia manufacturer claims that circular letters have been widely circulated in the United States criticizing the Canadian product and claiming that it is not properly manufactured or packed. It is questionable whether the reports above mentioned are entirely accurate. Many manufacturers scarcely believe that as much as 95 per cent. of the output is going south. There is no question however, that the United States markets are taking largely increased supplies of British Columbia shingles.

Every now and then one hears discussion in regard to the necessity, or the importance, of considering both sides of a board in connection with grading. This is a matter which becomes of much interest when one considers the consumption of lumber in the manufacture of furniture case-work, interior finish, table tops, and many other commodities on which only one side is exposed. So far as the consumer is concerned it makes no difference what the worse side of

the board looks like, so long as the material which is to be exposed is clear. Therefore, there is no reason why such a consumer should pay for lumber that is clear on both sides. Hardwood Record, in a recent article upon this subject says that many lumbermen are now taking advantage of the ability of consumers to use lumber with reference to one side only, and have been specializing in the sale of "one-face 1sts and 2nds." The description of lumber in this manner, it says, is different from the term "select," even where a definite select grade is provided, for in the rules. The select board is good on one side, of course, but the usual provision is that the worse side shall not be below a No. 1 common. In the special grade, known as "one-face 1sts and 2nds," the other side may be anything whatever, as nobody cares how many defects it carries. Certainly, this plan is a good one for the consumer, who gets what is to all intents and purposes good lumber for less than 1sts and 2nds prices, and for the lumberman, who can select his common stock so as to make good lumber out of it, as far as one-face only is concerned. Moreover, this selection means service to the consumer, for which he should certainly be willing to pay.

An observer with excellent opportunities for observation and a knowledge of the conditions in a recent letter from the Pacific Northwest to a U. S. lumber trade journal writes: "I am not seriously concerned about competition from British Columbia. In the first place, stumpage values are, as a rule, higher in the Province than in the States; the carrying cost is practically the same, and the cost of manufacturing is greater. We cannot hope to compete with British Columbia in the shingle business, because British Columbia manufacturers who have behind them such a vast quantity of cedar are willing to convert their best logs into shingles, whereas on this side of the line we make our best logs into boards and convert the waste into shingles. As a result, the Province turns out better shingles than we do. The reputation of the product is already established throughout the States and particularly in the New England market. On the other hand the Province has a very heavy percentage of so-called inferior species and low grade timber to be disposed of in the face of our competition with better timber. The balance of the trade in lumber as between Canada and the United States is greatly in our favor. In fact the British Columbia lumbermen are constantly complaining against the large shipments made into the Prairie Provinces by us. The Government of the Province is busy right now in seeing to it that a large percentage of the increment shall flow into its treasury. We need have no fear of serious competition except as it shall be made possible through the operations of our absurd shipping laws in their relations to the trade we will some day have along the Atlantic seaboard."

Toronto Lumbermen Organize Club

Hold Meeting and Appoint Committees to Work Out Preliminary Details—Directors and Officers Chosen

A meeting of lumbermen of the city of Toronto was held at the Queens Hotel on Friday afternoon, March 13th, for the purpose of discussing the advisability of forming a Toronto Lumbermen's Club. There was a good attendance and all present were heartily in favor of such a step. An informal discussion took place for some time, during which several of those present described the clubs which already exist in a number of United States cities, such as St. Louis, Cleveland, Chicago, Detroit, etc. Practically all these clubs are run upon similar principles. They provide a suitable place of meeting for lumbermen, where it is possible to take visiting members of the trade and also where luncheon is served daily. These clubs are enthusiastically supported by the trade and, every day, a lumberman can depend upon meeting at the club a number of other members of the trade. This makes the club exceptionally valuable from a business point of view and also introduces a social feature which goes a long way towards developing among the members of the trade a commendable spirit of good fellowship. Some of the clubs also make a feature of having periodical meetings of a general nature at which the members partake of a luncheon, or evening meal and are then entertained either by a smoking concert or an address by some prominent business or public man.

Many members of the trade in Toronto have been considering for some time the advisability of forming such a club, for the Toronto trade. The result of the meeting was, that after a very interesting discussion, a motion was presented by Mr. W. J. MacBeth and seconded by Mr. J. G. Cane, to the effect that the meeting be considered the first meeting of the Lumbermen's Club of the city of Toronto and that a membership list of those present be drawn up. This motion was carried unanimously, after which a motion was introduced by Mr. W. J. Lovering, seconded by Mr. L. F. Strickland, that Mr. G. Wilf Boake be appointed treasurer of the club. This motion was also carried. A third motion was carried that Mr. H. Boulton (Canada Lumberman) be secretary of the club.

On motion of Mr. J. G. Cane, a list of those present was drawn up, each member signing his name to an agreement to become a member of the Toronto Lumbermen's Club and to pay a provisional membership fee, which, on motion of Mr. W. J. MacBeth, seconded by Mr. L. F. Strickland, was placed at \$10.

In order to proceed immediately with the carrying out of the preliminary details connected with the formation of the club, two committees were formed, one to act as provisional directors, consisting of Messrs. J. G. Cane, W. J. MacBeth, R. A. Rastall, G. Wilf Boake, H. Boulton and A. E. Eckardt. The second committee, consisting of Messrs. Jas. Lauder, J. G. Cane and W. J. MacBeth, will look into the matter of securing quarters for the club. In this connection, the opinion of those present was in favor of securing a suitable room or rooms in connection with some hotel or restaurant, where meals may be secured, preferably upon the American plan. It was at first suggested by Mr. W. J. Lovering that the club should confine itself for a time to the holding of weekly luncheons, with a view to getting all the members of the trade thoroughly interested, before expanding into a regular club with fixed quarters for daily use. This idea was discussed at some length, but those present thought that the best way to place a club immediately upon a working basis would be to secure fixed quarters where luncheon could be served and where members could meet one another daily. At the same time, it was decided that a few members of the club should call upon lumbermen in the city immediately and sign them up as members. This idea proved acceptable to all present and it was agreed that Mr. W. J. Lovering, Mr. G. Wilf Boake and possibly one or two others should take this work in hand.

After further informal discussion which indicated strongly that the members of the trade in Toronto would support a club of this nature with enthusiasm, and would find it extremely valuable to them in many ways, the meeting was adjourned. A further meeting will be held in the near future, as soon as the committee upon securing quarters and the committee upon securing members are ready to make their report.

Those who were present at the meeting were W. J. Lovering; J. R. Chelew, Chelew Lumber Company; A. E. Eckardt, R. Laidlaw Lumber Company; R. B. Elgie, Elgie & Jarvis; J. A. Detweiler, Quincy Adams Lumber Company; Ross A. Rastall; Jas. Lauder; W. J. MacBeth; Thos. Gray; Geo. H. Hager, S. A. Hager & Son; L. F. Strickland, Canada Lumber Company; Harold W. Thompson and H. Boulton, Canada Lumberman; J. M. Donovan, Long Lumber Company and G. Wilf Boake. In addition to these, letters and messages indicating approval of the proposal to form a club were received from many of the Toronto trade, who, on account of their business engagements, were unable to attend. Among these were Robert Vestal,

Atlantic Lumber Company; W. J. Hetherington, Wm. Laking Lumber Company; H. J. Terry, Muir, Terry & Gordon; D. McLaren, H. G. McDermid and C. W. Wilkinson, Union Lumber Company; A. C. Manbert, Graves, Bigwood & Company; and Hugh A. Rose, Canadian Western Lumber Company.

The Workmen's Compensation Act

The Workmen's Compensation Act introduced into the Legislature of Ontario, received its first reading on March 17th, a second reading a little later and was then submitted to committee. The indications at the time of this writing were that the bill would be put through by the government with very little additional change and become the law of the province. The whole situation is a most unfortunate one, leading to the feeling, on the part of manufacturers and employers, that their interests have been betrayed and that they are entitled to very different treatment from that which they have received. They believe that the bill, for reasons which have already been outlined in these columns, is nothing short of grotesque. If passed in its present form, it means that the administrative board to be appointed under the Act will have almost unlimited powers to draw up a measure for themselves, which will be practically a new one. From the manufacturers' point of view the whole bill is an impossible one. Certain lines of action must be definitely prescribed for the board. For the successful working out of so important a measure, the bill should be very minutely settled in practically all its details, from the outset. A single illustration of the bill's impracticability is afforded by the proposed method of assessment. The board is empowered, at the end of the year to assess for the accidents which have occurred during the past year. How will it be possible under such a system to secure the contributions of such firms as may have come into existence and gone out of existence during that year, whose contributions nevertheless, to the general fund, would be of great importance? The only practical method would be based upon an assessment upon the estimate pay roll at the beginning of each year. This is just one of many instances that could be cited in criticism of the bill as it stands. Manufacturers and employers throughout the province are so much concerned in regard to the situation which is likely to be forced upon them, that a movement is at present on foot for holding a large convention to protest against the measure in its present form.

Forest Product Laboratories Being Increased

Not quite six months ago, the Federal Government established the Forest Products Laboratories at McGill University, with view to conducting scientific investigations which will assist the movement for forest conservation, particularly in the matter of preventing waste and utilizing products which are now allowed to decay or are destroyed owing to lack of knowledge of how they can be profitably utilized. The work is divided into seven branches, each having a distinct bearing on the economical utilization of lumber. The laboratories are a branch of the Forest Branch of the Department of the Interior. It is now proposed to increase the work, and application has been made to the University for use of the Nelson building on University Street, Montreal, and this will be granted, provided repairs can be carried out. Later, the laboratories will be housed in one of the new buildings which are to be erected. At present the department is located in part of the old medical building and the experiments are carried out in the laboratories in the engineering building. It is proposed to increase the staff during the present year, and when the departments of wood preservation and wood distillation are added, the staff will have to be still further augmented. The department is in charge of Mr. A. G. McIntyre, but on his leaving to take up the duties of manager of the Bathurst Pulp and Paper Company, to which he has just been appointed, he will be succeeded by Mr. John S. Bates, B.A.Sc.

Move Toronto Offices

The Atlantic Lumber Company has removed its Toronto offices of which Mr. Robert Vestal is manager, from 211 Kent Building to 110 Manning Chambers. The Atlantic Lumber Company are manufacturers and wholesale dealers in southern hardwood lumber, with head office at Boston, Mass., and mills at Knoxville and Walland, Tenn., and Franklin, Va.

Log production in February totalled 26,410,998 feet in the coast district of British Columbia. This is approximately 5,000,000 feet more than in January, and is still very low.

The Great Western Railway Company of England has recently placed a contract with Herbert Morris, Limited, for the supply of all the Chain-Blocks which may be required during the year 1914. This is the thirteenth successive year in which the Great Western Railway Company has decided to purchase Morris Chain-Blocks.

E. I. Harrington now with Boake Mfg. Co.**Mr. E. I. Harrington.**

About a year ago Mr. E. I. Harrington, whose portrait is published herewith, being imbued with an ambition to find a larger field for work than the one in which he had been engaged in the United States, came to Canada and accepted a position as sales manager for the Canada Lumber Company of Toronto. After a year of very successful work in this position, Mr. Harrington is making another change and taking a position with the Boake Manufacturing Company of Toronto as manager of their sash and door department. Mr. Harrington comes from Columbus, Ohio, where he attended the Ohio State University. He received his early business training with the Cole Manufacturing Company of Memphis, Tenn. Returning later to Columbus, he was

appointed general buyer of the sash and door department of the Cussins and Fearn Company, a position which he occupied with much success until his removal to Canada.

Mr. Harrington is a sash and door specialist, and an authority in his line. During his year in Canada, he has become forcibly convinced of the great prosperity which is in store for this country, with its great extent of territory, unlimited resources and independent and progressive people. Mr. Harrington, in short, has become an enthusiast on Canada and can see nothing but prosperity ahead for this country.

Mr. Harrington succeeds Mr. Kenny S. White who has worked up an excellent trade for the Boake Manufacturing Company in sash and doors during the past five years and whose retirement from the retail end to take an important position with the Payne Lumber Company of Oshkosh, Wis., will be regretted greatly by many buyers of doors and sash. Mr. Harrington, however, will do his utmost to fill this gap successfully.

Kenny S. White to Represent Paine Doors

Mr. Kenny S. White who has been in charge of the sash and door department of the Boake Manufacturing Company, Toronto, for the past five years, has accepted a position with the Paine Lumber Company, Oshkosh, Wis., and from April 1st will represent them on the road throughout Canada. His headquarters will be at Oshkosh. The Paine Lumber Company, as most lumbermen know, specialize in veneered hardwood doors. Mr. White has not only had valuable experience in connection with the sash and door business with the Boake Manufacturing Company; but also was, at one time, a very successful traveller for the Gilmour Door Company of Trenton, Ont., so that the Paine Lumber Company are securing, as their Canadian traveller a man who knows the trade thoroughly and who is a specialist in their line.

British Columbia's Royalty Bill Widely Approved

Many compliments have been received by the Hon. William R. Ross, Minister of Lands, for British Columbia, in regard to the Timber Royalty Bill recently passed, in which the principle of profit-sharing in the timber resources was a feature. Prominent Canadians and residents of the United States, including members of the Cabinet of that country, have sent letters warmly commending the new Act.

Henry S. Graves, Chief Forester of the United States, writes: "I have just learned of the recent action by British Columbia with reference to the royalty on public timber. I want to express my pleasure at the great progress which has been made in your country and to extend my heartiest congratulations. The recognition of the right of the public to share in the increasing value of public timber is, in my opinion, a vital one."

The Secretary of the Department of Agriculture of the United States writes: "The plan of readjusting stumpage values of timber at stated intervals in sales from public lands whereby the public will derive a fair share of the increase in lumber values is one with which I am in hearty accord. You will doubtless be interested in learning that a provision of this character is included by this Department in all contracts for sales of timber from National Forest lands where the period of contract is in excess of five years, and that it has been accepted as equitable by timber operators. I feel that you are to be heartily congratulated on this progressive legislation."

Hon. Clifford Sifton, President of the Canadian Commission of Conservation, writes congratulating the Minister of Lands and says: "I have repeatedly said during the last year that British Columbia was the most advanced province in the Dominion so far as attention to the question of forest protection was concerned, and I may now say the same thing in regard to the question of disposition of timber belonging to the province."

St. Lawrence Company Has Large Plans

The St. Lawrence Pulp & Lumber Company of Canada, whose incorporation, financed and controlled by William Whitmer & Sons, Inc., lumbermen, and Chandler & Company, Inc., and W. F. Fuqua & Company, bankers, all of Philadelphia, was recently reported in these columns, is one of the most extensive propositions of its kind ever started in Eastern Canada. The company obtained under Crown grant a tract of some 640 square miles of spruce, balsam and cedar and pulp-wood, located in the counties of Gaspé and Bonaventure, Province of Quebec. Its mills will be located on Chaleur Bay (an arm of the Gulf of St. Lawrence) at the mouth of the Grand Pabos River, which of itself forms a spacious bay. Prior to the present ownership of the property, the interests affiliated with its organization had the tract cruised by Messrs. Lemieux Bros. & Company, New Orleans, La., expert timber estimators, who reported the tract superior to any they have ever estimated in the Province of Quebec, Nova Scotia or New Brunswick. The timber along some of the streams has never been touched.

The timber, they state, consists of spruce, balsam, cedar, white and yellow birch, and scattered white pine. Disregarding the pine and birch they estimate the quantities of timber on the tract, log scale, Quebec rule, as follows:

Balsam	1,212,000,000 feet
Spruce	969,600,000 feet
Cedar	121,200,000 feet

Total merchantable timber	2,302,800,000 feet
Pulp-wood	4,040,000 cords

These totals the estimators consider very conservative, especially the pulp-wood, which they have stated to be 10 cords an acre. Practically there is an almost unlimited supply of pulp-wood on this land, enough to turn out easily 60,000 to 100,000 cords a year. The property, they say, could easily support three saw mills of a capacity of 100,000 feet a day each.

The transportation facilities are specially good, as the tract is traversed by four main rivers, the Grand Pabos, the Little Pabos, the West River and Port Daniel River. The timber is all easily accessible by water and the topography is such that logging by railroad is also very convenient.

As to shipping, the property is accorded the double facilities of railroad and ocean transportation. It is four days distant by water and two or three days by rail from New York and nearer in point of time to that city than the timber fields of West Virginia.

The company will have a saw mill of 150,000 feet daily capacity; a sulphite pulp-mill of 100 tons a day, and a standard gauge railroad, connecting with the Atlantic, Quebec & Western railroad. About 9½ miles of the railroad, including terminal trackage have been completed, and it is now in operation into the timber limits, reaching Camp No. 1. The mills and town site are located on the northeast shore of the Grand Pabos bay and are ideally situated from an operating standpoint. The saw and pulp mills face each other on the sides of two adjoining hills. An arm of the bay runs between them and is being dredged to form a hot pond, into which the logs will be dumped, and drawn out by the two mills as required. The present equipment now on the ground consists of one 70-ton Shay locomotive, an American Locomotive Company direct drive line engine, five steel flat cars for logs, an American log loader, with steam shovel attachment, tug boat, barges, etc. Thirty additional steel log cars have been ordered.

Will Permit Export of Pulpwood Temporarily

A bill has been introduced in the Ontario Legislature by Hon. W. H. Hearst, Minister of Lands, Forests and Mines, to permit the export of pulpwood, temporarily, during the present year. So much timber was blown down in Ontario by the severe gales last fall, that it has become of great importance to have it moved quickly, so as to avoid loss and danger from fire. For this reason the government has decided to remove "the manufacturing condition" in connection with pulpwood logs. A bill has also been introduced by Hon. Mr. Hearst to amend the forest fires prevention act, to enable the Minister of Lands, Forests and Mines, upon application from any municipal council, to order the owner of land within the limits of the municipality or adjacent thereto which is a source of danger from fire on account of unfinished clearing, to clean up the land properly within a fixed time. In case the owner fails to do so, the bill provides that the Minister may have the work done and the cost charged to the owner.

Valuable Report upon the Trent Valley

Government Management Could Still Make it an Extensive Producing Area—Interesting Comparison of Cut To-day With Thirty Years Ago.

A valuable report upon the Trent Valley Watershed in Ontario, prepared by C. D. Howe & J. H. White of the Faculty of Forestry of the University of Toronto, on behalf of the Canadian Commission of Conservation has been published by the Commission. The report also contains an introductory discussion by Dr. B. E. Fernow, Dean of the Faculty of Forestry, of the University of Toronto. The report is elaborate and unusually complete, when one considers that it is the result of a field survey carried on during the course of one summer. It presents the problem of the Trent Valley in clear and very definite form, and outlines a method of solution which, if carried out, will result in incalculable benefit to that part of the province of Ontario.

Dr. Fernow, in his introduction, after dealing with the Trent Valley problem in general, discusses the causes of deterioration which have led up to the present situation. At the present time, he says, the pine timber, at least, is practically gone from this watershed. A forest cover still exists, but, with the present commercial value almost entirely extracted, interest in its condition is gone; fires have swept through it repeatedly, each time causing further deterioration of the forest cover, until, finally, the bare rock condition or man-made desert is the result. At present, only beginnings of these conditions can be seen here and there, yet in the three townships of Methuen, Anstruther and Burleigh alone, nearly 150,000 acres of such desert exist. And, if the present policy of indifference and neglect continues, what might have been a continuous source of wealth will become, not only a useless waste, but, through the changes which the water conditions will undergo, may also prove a menace to industries which have been developed to utilize the water-powers of this watershed.

Here is an area similar to thousands of square miles in other parts of the eastern provinces, and the conditions in this watershed are by no means extraordinary. They repeat themselves wherever axe and fire have been permitted to destroy the original growth in the Archaean rock country, that is to say, wherever lumbering under the license system has been permitted, without safeguarding the property as a producer. The sequence of this mismanagement is everywhere the same. The removal either of the best or of all timber, without disposing of the debris, leaves a slash which is invariably subject to fire; after this, a loss of interest takes place on the part of the licensee and, what is still worse, on the part of the government. Nature then attempts to reproduce the forest and this is followed by a repetition of the fires, which kill the seed trees and seedlings of the better kinds. The ground is then re-covered by aspen and birch for a time; but, through repeated conflagrations, it is finally rendered useless for any productive purpose.

Recommendations

Discussing the methods to be adopted for improving the situation, Dr. Fernow says: Nobody who has studied the conditions presented in this report will hesitate a moment in agreeing that the bulk of the country involved should be placed in, and managed as, a permanent forest reserve for the growing of timber. The only question can be: How this is to be brought about? There are at least five interests to be considered or reckoned with and to be brought into co-operation in building up such a territory—the Dominion Government, the Provincial Government, the municipalities in which the territory is situated, the private owners of properties and of timber licences, and the public at large.

Besides the general interest which the governments naturally have in the economical condition and development of any portion of the commonwealth, the Dominion Government has a special interest in maintaining the canal. The Provincial Government still controls about one-third of the area, partly under timber licenses, partly in cancelled or abandoned lots. The municipalities are naturally most closely interested in seeing as much of their land as possible put to profitable use, in order to reduce the individual tax assessments and, at the same time, to permit of a higher degree of civilization through increased industrial activities and educational facilities.

Private landholders will be benefited by better protection. Their property will increase in value owing to the improved environment, particularly if a continuous improvement of conditions is assured in place of the present tendency towards deterioration. With management for perpetuity, instead of exploitation for a short time, permanent manufactures can be established, industrial development will increase, and the public at large will gain in prosperity.

Co-operation of all these agencies will be necessary to carry through any far-sighted, persistent policy. The co-operation of the three administrative agencies, the Dominion, Provincial and Municipal governments, is especially needed to develop anything like a

permanent forest policy, for forest growth is slow, and financial results from timber growing, the only incentive for private enterprise, are slow in coming, so that only persistent entities like governments can be expected to carry on the business of timber growing. The policy, then, should be to bring all the lands which are not strictly farm lands as rapidly as possible under the control of one, or any, of these three agencies. These lands should be combined into one or more forest reserves, and a forest administration should be provided for.

For the management of these properties with a view to obtaining a substantial yield, Dr. Fernow says that the co-operation of a financially strong government, with its superior credit and organization, is needed. If, as appears probable from the appointment of a provincial forester, the provincial government assumes its responsibility for the future of the timber resources of the province, this region offers a most promising first field for action. A plan should be drawn up for recovering licensed lands and for dividing them into units to facilitate management, some to be managed by the province and some by the municipalities. The plan should allow for the provision of technical advice for their management, and for the furnishing of such financial assistance as may be necessary through a municipal and state bonding scheme. The rights of supervision and participation in eventual returns should be retained by the province. Some such plan of co-operation should obviously be elaborated; the province selecting for transfer to the municipality such tracts as entail merely protection, and undertaking the management of the more complicated tracts as its own reserves.

The first step for the province to take would appear to be to repossess itself of the licensed lands which have practically ceased to produce the quantity of logs contemplated under the original licenses. The next thing would be to impose upon the timber limit holders, who have still some valuable timber left, such conditions as would prevent the jeopardizing and the destruction of the property itself.

If the province assumes the responsibility of such a conservative forest policy, the Dominion might well be relieved of participation in it, for its interests would then be subserved. If, however, it is not the intention of the province to protect, recuperate, and manage these forest areas efficiently, the Dominion should, by control of the watersheds, be placed in a position to protect its water rights.

An efficient forest management, especially of cut-over lands, can be satisfactorily carried on only if compact properties of sufficient size are placed under one management. It is a great advantage that such conditions are found here, namely, compact areas of land in the hands of the Province, which could be placed in one reserve under one manager. The man in charge of such property must be a real and circumspect manager, continuously active on the ground. His first duty would be to make a careful survey and map of the property, showing conditions in detail, at the same time, organizing an effective service for protection against fire, building watch-towers, and, where roads or ready means of travel do not exist, he should provide trails, gradually perfecting the protective service. Next, he must make it his business to encourage the establishment of small woodworking manufactures that can utilize the mature hardwood timber, as well as the minor forest products now going to waste. The small values that can be secured by an efficient local manager so far as possible, must be made to pay the cost of recuperation. He must also encourage private enterprise to develop the tourist travel and foster the fish and game resources as a not unimportant asset of the forest reserve. Then follows the improvement of existing stands and of natural regeneration by thinnings, the proceeds of which should, together with the profits of such logging of mature timber as may still be done, pay for the operation.

As to financial outcome we can quite reasonably figure that a 500,000 acre reserve, half the present forest area, managed in the manner indicated, even in the poor condition in which it is found, could almost from the beginning pay for its maintenance by the sale of odds and ends of available timber at the rate of 5 cents per acre, or \$25,000 per year. Within a decade, when the first 750,000 cords of poplar pulpwood become available this would yield, if cut off in 25 years, at least \$100,000 per year, or 20 cents net revenue per acre, from this source alone. By the time this is exhausted and replaced by a young pine stand, further pulpwood areas and some pine would have become ready for the axe, wood values would have increased, and an annual income of not less than \$2 per acre from a sustained wood yield may be assured forever. This would be less than one-third of the net revenue derived from a forest property of approximately the

same size in Germany, the State Forest of Wurttemberg—not an unreasonable expectation!

The natural reproduction on the areas that are kept free from fires is found unusually favorable; it would therefore not be too sanguine to expect eventually an annual increment of 100,000 M. feet of saw timber besides other materials; that means an annual business in growing, harvesting, transporting, and manufacturing, of not less than \$5,000,000 to \$6,000,000.

Lumbering Conditions

An interesting section of the report deals with lumbering conditions which existed in the Trent Valley in earlier days, comparing them with those of the present day. In former times, the report states, the region under consideration lay within the southern fringe of the vast pinery that covered the southern slope of the Laurentian shield. In nearly all the townships, licenses had been issued in the early "sixties," and by the "seventies" the lumbering industry was one of the first magnitude. During the season of 1872-73, the cut of pine from this watershed amounted to some 120,000,000 feet; last season probably less than 10,000,000 feet of pine were cut. The same season saw the close of operations by the largest pine lumbering concern of the region; probably but four concerns remain able to scrape together a million feet of pine yearly. Five years will see the end of the pine so far as commercial quantities are concerned. With the exhaustion of the remaining softwood stands, mainly hemlock, in certain portions of Stanhope, Sherborne, Galway, Cavendish, and Anstruther, the lumbering of coniferous species will be practically at an end, and this will be within a decade. The present limit holders realize this and are buying all they can from settlers. One mill was found whose sole supply of logs came from discarded logs of former operations and pine "rampikes" dead many years.

At present there are ten lumbering concerns whose operations within the watershed exceed one million feet of logs a year each. The total cut in 1911-12 was in the neighborhood of 40 to 45 million feet, distributed approximately as follows: pine 40 per cent., hemlock 20 per cent., with small amounts of spruce, basswood, ash, elm, cedar, birch, balsam, maple, tamarack and beech. Probably 10,000,000 feet of this came from the semi-virgin townships in the north owned in fee simple, with which we are not here concerned. As already intimated, the 1912-13 cut will show much less pine. The bulk of the logs are sawed at Marmora, Peterborough, Lakefield, Lindsay, and Cobocok.

Besides the saw-log industry there is a small production of cedar poles, posts and cross ties, shipped principally from Coehill, Kinmount and Haliburton. But the opinions of those engaged in the business confirm the field observations that the cedar swamps are nearly exhausted. Cedar is a species of such slow growth that its extinction, commercially, is unavoidable.

A small amount, probably not over 3,000 cords, of spruce, balsam and poplar, cut by settlers, is shipped out of the region, mostly from Kinmount and Gooderham, for manufacture into pulp and paper. Some of this goes to Campbellford, Thorold, etc., but the bulk of it goes to Pennsylvania despite the long transportation. This is probably owing to the fact that the majority of the Ontario mills possess their own limits. During the past season the average prices paid the settlers were \$4 per cord for poplar, and \$5.50 for spruce and balsam.

In addition to the pulpwood, there is a small trade in basswood and poplar for excelsior, and cordwood for fuel, to various Ontario towns and cities, as well as a small quantity of tanbark, which is shipped to factories at Acton, Toronto and Omeme. An example of close utilization is seen in the shipment of fire-killed pine, with cull pine and hemlock, to Toronto brickyards, from certain points along the Haliburton branch of the Grand Trunk Railway. There are also a few small cooperage plants at Marmora, Deer Lake, Glanmire and Kinmount, but elm, the species most largely used, is getting scarce.

In the wake of the lumbering operations, fire has followed, so that to-day over one-half (57.3 per cent.) of the forested area is composed of poplar stands, the majority of them 15 to 30 years old. These, with the hardwood areas, which as yet have been but little exploited, constitute the future source of wood supply in this region. The hardwoods cover one-third of the total forested area.

The future of the lumbering of the region lies mainly in the utilization of the poplar and maple. Some of the lumbermen, when discussing the possibilities of future industrial development, claimed that the maple, owing to seam and black heart, is unprofitable. But it must be borne in mind that the handling of hardwood is a proposition of so different a nature from pine lumbering that success cannot be expected where it is treated as a minor adjunct to a softwood business. Hardwoods as a whole are more defective, and the closest utilization of every log, not of maple only but of all the species, for the particular product for which it is best suited, is necessary to secure proper returns in the hardwood business. The field for the development of local minor wood-using industries, especially the

manufacture of small woodenware, has not, as yet, been developed, although waterpower is available everywhere.

The other species, poplar, now covering some 560,000 acres as a result of past fires, will, in the course of 15 to 20 years be mature, and ready for manufacture into pulp, matchwood, etc. It represents a forest resource of great value, not only owing to the great quantity in almost pure stands, but also on account of the favourable conditions of transportation and water-power manufacture.

Despite the deterioration during the last forty years in the character of the forested area of the Trent watershed this region still possesses much forest wealth—one worthy of conservation by progressive methods of treatment.

An appendix to the report contains the following interesting tabular comparison of the present cut of pine and that of thirty-one years ago.

Cut of Pine, Season 1872-73

Operators	Mill	Cut Ft. B.M.
Gilmour & Company	Trenton	22,000,000
Fowlds Bros.	Hastings	1,500,000
McDougall & Ludgate	Harwood	10,000,000
Ulyott, Sadler & Company	Harwood	12,000,000
Dickson Company	Peterborough	5,000,000
Geo. Hilliard	Peterborough	4,000,000
John McDonald	Peterborough	1,500,000
Jas. Z. Rogers	Ashburnham	1,000,000
Boyd, Smith & Company	Nassau	6,000,000
R. S. Strickland & Company	Lakefield	4,000,000
N. Shaw	Buckhorn	2,000,000
W. A. Scott	Mississauga River	5,000,000
Mossom Boyd	Bobcaygeon	10,000,000
J. D. Smith & Company	Fenelon Falls	9,000,000
Hilliard & Mowry	Fenelon Falls	4,000,000
Green & Ellis	Fenelon Falls	5,000,000
W. M. Snyder	Sawn by contract	3,000,000
A. H. Campbell & Company		4,000,000
Paxton, Bigelow & Trounce	Port Perry	5,000,000

117,000,000

In addition to the foregoing, there is the unenumerated cut of small operators and the cut of square timber for the Quebec market, figures for which are not available.

Cut of Pine, Season of 1911-12

Cavendish Company		8,500,000
Peterborough Lumber Co.	Peterborough	300,000
Alfred McDonald Estate	Peterborough	800,000
Pearce Company	Marmora	450,000
Phillips	Burnt River	110,000

10,160,000

Long Lumber Company Celebrates Tenth Anniversary

On Tuesday, March 17th, Mr. Guy H. Long, of the Long Lumber Company, Hamilton, Ont., celebrated the 10th anniversary of the foundation of the company by entertaining its employees at a very successful banquet which was held at the Commerican Club. It was just ten years on St. Patrick's day that the first bill of \$5 for office rent and use of typewriter for 2 weeks was paid by the Long Lumber Company. From that date until the present, the company had made wonderful strides, and is now one of the most successful and extensive lumber selling companies in Ontario.

At the banquet there were present about forty guests, the following being a list:—Guy H. Long, H. N. Kitson, J. S. Hossack, J. W. Stairs, Jos. Thwaites, W. R. Bennett, Jas. McNaught, Jas. Bethune, Tom Allen Jr., Jas. Bryers, A. Stewart, R. Press, F. Depew, John Poag, Bert McKay, Chas. Kilgour, Guy Montrose, J. J. Evel, Mr. Elliot, A. Tory, Alex. Milne, H. W. Thompson, Toronto, T. J. Rousell, C. A. Hunter, Roy Stewart, J. M. Donovan, Geo. Wisner, H. P. Brierley, D. G. Webster, F. R. Burton, Roy Anderson, Frank H. Harris, Toronto, Theodore Christman, Oliver Burke, W. E. Galloway, Bob Hysert, R. G. Wilson, E. M. Faulknor, Fred Williams and Frank Maw.

Mr. H. N. Kitson presided and acted as toast-master. The after dinner speaking consisted of proposals and replies to toasts to the King, to Mr. Long and to the guests. Several excellent speeches were delivered in connection with these toasts. An interesting musical programme was also carried out and when the speaking and music had been concluded the guests were entertained by various social games.

One of the most interesting events of the day was a presentation by the staff, to Mr. Guy H. Long, of an exceedingly handsome gold wrist watch, suitably engraved, which was greatly appreciated by Mr. Long.

Douglas Fir Timber For Toronto Harbor

Order for 24,000,000 Feet Secured by Empire Lumber Company—Contract Involves Over \$250,000—Timber to be cut at Genoa Bay Mill

A despatch from Victoria, B.C., states that the Cameron Lumber Company of Victoria in conjunction with the Empire Lumber, also of Victoria, has secured a contract from the Dominion Government for the production of 24,000,000 feet of timber to be used in the construction of the new harbor works at Toronto. The contract involves over \$250,000 and delivery must be completed within four years. This is a contract which constitutes a record in the lumber business and it is considered to be a direct result of the approaching opening of the Panama Canal.

According to the despatch from Victoria, the manner in which the contract for the timber finally reached the Cameron Lumber Company and the Empire Lumber Company is interesting. The despatch states that the contract from the Dominion Government for the construction of the harbor works was originally let to the Canadian Stewart Company of Toronto. A branch of the James Stewart Construction Company of New York. This firm sub-let the contract for the supply of timber to the Robert Dollar Steamship Company of San Francisco, who operated a line of tramp steamers from the Pacific Coast. The Robert Dollar Steamship Company sub-let the contract for timber to the Empire Lumber Company, which has recently commenced to develop its large holdings in the neighborhood of Cowichan Lake on Vancouver Island.

The Empire Lumber Company is planning to build one of the largest mills on the coast, at Crofton, B.C., in the near future. They have sub-let the contract to manufacture the timber, to the Cameron Lumber Company. Messrs. J. O. & D. O. Cameron of this firm are the owners, together with Messrs. R. T. & G. R. Elliott, of the Genoa Bay Lumber Company, whose plant is located at Cowichan Bay, on Vancouver Island. The timber will be manufactured at this mill, which has a capacity of 125,000 feet in ten hours and is one of the most efficient mills to be found in Canada. The equipment of the mill is such that it can take timbers up to 100-foot lengths.

The contract includes over 35,000 timbers 40 ft. long and 12 in. square. Work upon the contract will be commenced without delay. The mill at Genoa Bay was recently closed down temporarily so as to undergo a thorough over-hauling before commencing upon this contract. The timber will be taken from Cowichan Lake to tidewater on a

new line of the E. and N. Railway which has recently been completed. It will then be towed around to Genoa Bay, a distance of about 12 miles.

The timber limits of the Empire Lumber Company are located near the north end of Cowichan Lake and contain many thousand acres of the finest timber on the Pacific Coast.

Information recently secured is to the effect that the first shipments of these timbers from the Genoa Bay mill will be brought across Canada by rail. As soon as the Panama Canal is opened the balance of the shipments will come by that route. The Dominion Government already has an inspector on the ground whose duty it will be to pass upon all the timber before it is shipped from the mill.

The Empire Lumber Company, from whose limits the timber for this contract will be secured acquired their limits, amounting to 53,000 acres, from the E. and N. Railway in 1909. The company is a subsidiary corporation of the American Finance & Securities Company of New York City, and is capitalized at \$7,500,000. Mr. W. E. Marsh of New York is president of the Empire Lumber Company, and Mr. C. C. Yount is vice-president and general manager.

A meeting of timber licence holders of British Columbia was recently held at the offices of the British Columbia Lumber and Shingle Manufacturers' Association, at which Mr. M. S. Logan, who represented the licence holders at Victoria during the progress of the recent legislation affecting royalties on timber, made a report. The meeting was private, but it was stated subsequently that those present expressed their approval of the bill as finally passed. Although they had not secured everything they desired, they felt that the government had dealt fairly with the industry and that the result of the new regulations would be beneficial to the industry of the province.

The new tariff for trans-Pacific lumber freights from Victoria, Vancouver, Puget Sound and Portland became effective on March 1st. It represents a reduction of \$1 per thousand feet. Lumber 1 in. x 12 in. x 40 ft. will be carried at \$8 per thousand feet. For 14 in. x 14 in. not exceeding 40 ft. in length, the rate is \$9 per thousand feet. For timbers between 40 ft. and 50 ft. in length, the rate is \$10, per thousand feet and for lengths exceeding 50 ft., \$11 per thousand feet.



Where Toronto Harbor Timbers will be sawn—Genoa Bay Lumber Company's plant at Cowichan Bay, B. C.

Electric Drive in a Large B. C. Sawmill

Plant of E. H. Heaps & Co. Fully Equipped for Operation by Electricity—Detailed Description of Machinery and Buildings

The advantages of electrical drive in lumber mills have of late been more generally recognized by millmen, and it has been adopted in many of the lumber mills erected during the last few years. Experience shows that it possesses the advantages of efficiency and economy and practically eliminates line shafting and belting, thus reducing the up-keep expenses to a minimum. The important features in connection with electric drive are the ability to locate the machinery where most convenient to avoid rehandling the lumber, and to operate any group of machinery or any individual machine at any time.

That isolated electrical power plants in connection with lumber mills, where fuel is available at practically no expense, have proven a commercial success, is an undisputed fact. A suggestion a few years ago that met with a good deal of incredulity was that in the near future the central station would be supplying power to operate lumber mills. This phase of the question has received an increasing amount of attention, however, and judging from the number of mills already receiving power from central stations, it is fair to assume that, where an uninterrupted service is available it possesses many advantages worth investigating by millmen.

Model Plant and Equipments

A description of the modern electrically-driven saw and planing mill erected by E. H. Heaps & Company, Limited, at Ruskin, B.C., tends to substantiate the statement that the central station has entered the field and is apparently meeting with success. The plant and town site, occupying an area of 152 acres, enjoy an extremely favorable location, having frontage on the Fraser River and being bounded on the east by the Stave River which affords absolutely ideal facilities for holding logs. The plant commenced cutting early in 1913, running in the main side only. When completed it will have a daily cutting capacity (10 hours) of approximately 250,000 feet of lumber, 500,000 shingles and 50,000 lath.

The sawmill is housed in a three-storey building, which is 402 feet long and has a width of 110 feet in one part. Its narrow portion is 64 feet wide. One side was operated for several months last season, and the second side will be fitted up in the near future as a short log mill, the machinery for which is now on order. The sawing machinery at present installed consists of a 10-ft. Allis single cut band, an 84 x 12 heavy Allis Pacific Coast edger, 7-foot Merzhon band resawing machine, automatic air trimmers, slab slashers, etc., and a Stetson Ross automatic sizing machine. The mill is also equipped with the latest Simonson log turners, kickers, automatic transfers, etc. The planing mill occupies a building measuring 121 x 134 feet. Arrangements have been completed for the construction of the shingle mill, 35 x 120 feet, and a lath mill, in time to cope with the early summer trade. The erection of the shipping-shed 70 x 120 and a large dry stock shed, will also be proceeded with during the early spring. Six dry kilns will be required to handle the mill output, three of these being now almost completed. The kilns are of the North Coast type, and will occupy a total space of 720 x 120 feet with stone foundations, brick walls and concrete roofing.

Source of Electric Power Supply

The Western Canada Power Company at the time plans were prepared for this mill, were supplying the power for 11 motors aggregating 335 h.p. in connection with the E. H. Heaps & Company's new planing mill at Cedar Cove, Vancouver, B.C. The power at Ruskin is also bought from the Western Canada Power Company, who have erected a fireproof sub-station on the company's mill premises. The power is received here from the generating centre, about 7 miles distant, at a potential of 12,000 volts. It is controlled by a hand operated automatic overload G.E. oil circuit breaker, mounted on an iron frame work. From here it passes to three 12,000/400 volt Allis, Chalmers, Bullock o.i.w.c. transformers of 333 1/3 kw. capacity each. Space is also provided for another bank of three transformers of the same capacity. The power is transmitted from the transformers to the main switchboard in the mill by temporary mains consisting of three 1,000,000 c.m. cables.

Switchboard and Panel Equipment

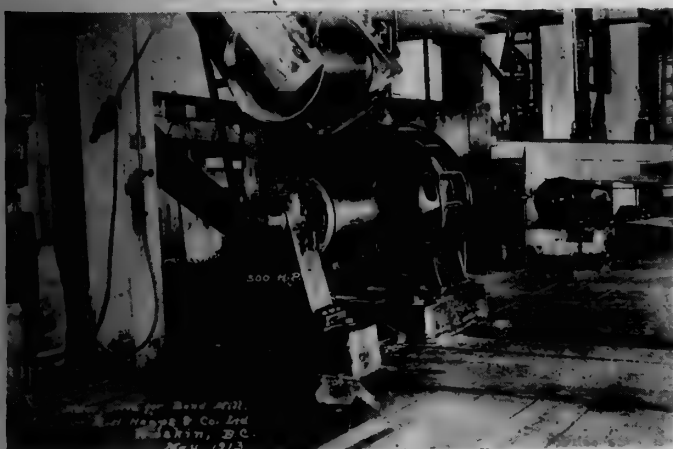
The main switchboard is of special design and was built at the mill. It consists of four panels of 2-in. blue Vermont marble. Two panels are each 24-in. wide and two are 30 in. wide, giving a total width of 9 ft. The board stands 7 ft. 6 in. high and about 5 ft. from the outside wall.

On the first panel, which is 24 in. wide, are mounted:—one 7½-in. Wagner, 110 volt, a.c. voltmeter; one 7½-in. Wagner, 500 a., a.c. ammeter; one 400a, 250 v., d.p.d.t. knife switch; eight 50a, 110 v., d.p.s.t. knife switch. On the second panel, also 24-in. wide, are mounted:—one 7½-in. Wagner, 600 v., a.c. voltmeter; one 7½-in. Wagner, 2000 a., a.c. ammeter; one 2000a, t.p.s.t., type E "Condit" oil switch. On each of the two 30-in. panels are installed two 500a, t.p.s.t., automatic, "Condit" oil circuit breakers.

There are at present four distributing panels. Panels Nos. 1 and 2 are each controlled by one 500a circuit breaker on the main switch-



Slasher with Direct Connected Motor Drive



Motor Drive for Band Mill



Edger, with Direct Connected Motor Drive

board. Panels 3 and 4 are controlled from one 500a circuit breaker, leaving one circuit breaker for future extensions to the mill.

Panel No. 1 consists of the following fuse blocks,—2 sets of 401-600a; 2 sets of 201-400a; 4 sets of 61-100a; 8 sets of 31-60a; 2 sets of 0-30a. This panel is of 1-in. marble, is 8 ft. 8 in. long and 2 ft. 6 in. high and completely enclosed in steel cabinet. All the fittings on same are polished copper and back connected. There are at present controlled from this panel the following motors, all belt connected to their machines,—

H.P.	R.P.M.	Type	What Drive
300	900	Slip ring	10-ft. Allis band mill.
40	1200	Squirrel cage	54-in. jump saw.
30	1200	Squirrel cage	Log haul.
20	1200	Squirrel cage	Conveyor.
15	1200	Squirrel cage	Conveyor.
10	1200	Squirrel cage	Roll case.
10	900	Slip ring	Conveyor.
7½	1200	Squirrel cage	Trout set works.
7½	1200	Squirrel cage	Canting gear and rock saw.
5	1200	Squirrel cage	Filing machinery.

Panel No. 2 is also of 1-in. marble, 4 ft. 8 in. long and 2 ft. 6 in. high. Fuse blocks are polished copper and back connected and consist of the following sizes:—1 set of 401-600a; 1 set of 101-200a; 4 sets of 61-100a; 2 sets of 31-60a. The following motors are at present controlled from this panel; the first two machines are direct connected,—

H.P.	R.P.M.	Type	What Drive
200	1200	Squirrel cage	84-in. Allis-Chalmers edger.
75	860	Squirrel cage	10-48-in. slasher saws & chains.
20	1200	Squirrel cage	Transferer.
20	1200	Squirrel cage	Transferer.
10	860	Slip ring	Conveyor.

Panel No. 3 is of 1-in. marble and front connected; fuse blocks are as follows,—1 set of 401-600a; 3 sets of 101-200a; 2 sets of 61-100a; 4 sets of 31-60a. The following motors are at present controlled from this panel; the saw trimmers are direct connected,—

H.P.	R.P.M.	Type	What Drive
150	850	Squirrel cage	7-ft. Mershon resaw and transfer chain.
50	720	Squirrel cage	24-in. saw trimmers & transfer chains.
20	1800	Squirrel cage	2 cut-off saws.

15	1200	Squirrel cage	Roll cases.
10	1160	Slip ring	Conveyors.

Panel No. 4 also of 1-in. marble and front connected, contains,—4 sets of 201-400a; 7 sets of 61-100a; 2 sets of 31-60a; 1 set of 0-30a. The following motors are at present controlled from this panel; the sizer and pony edger are direct connected,—

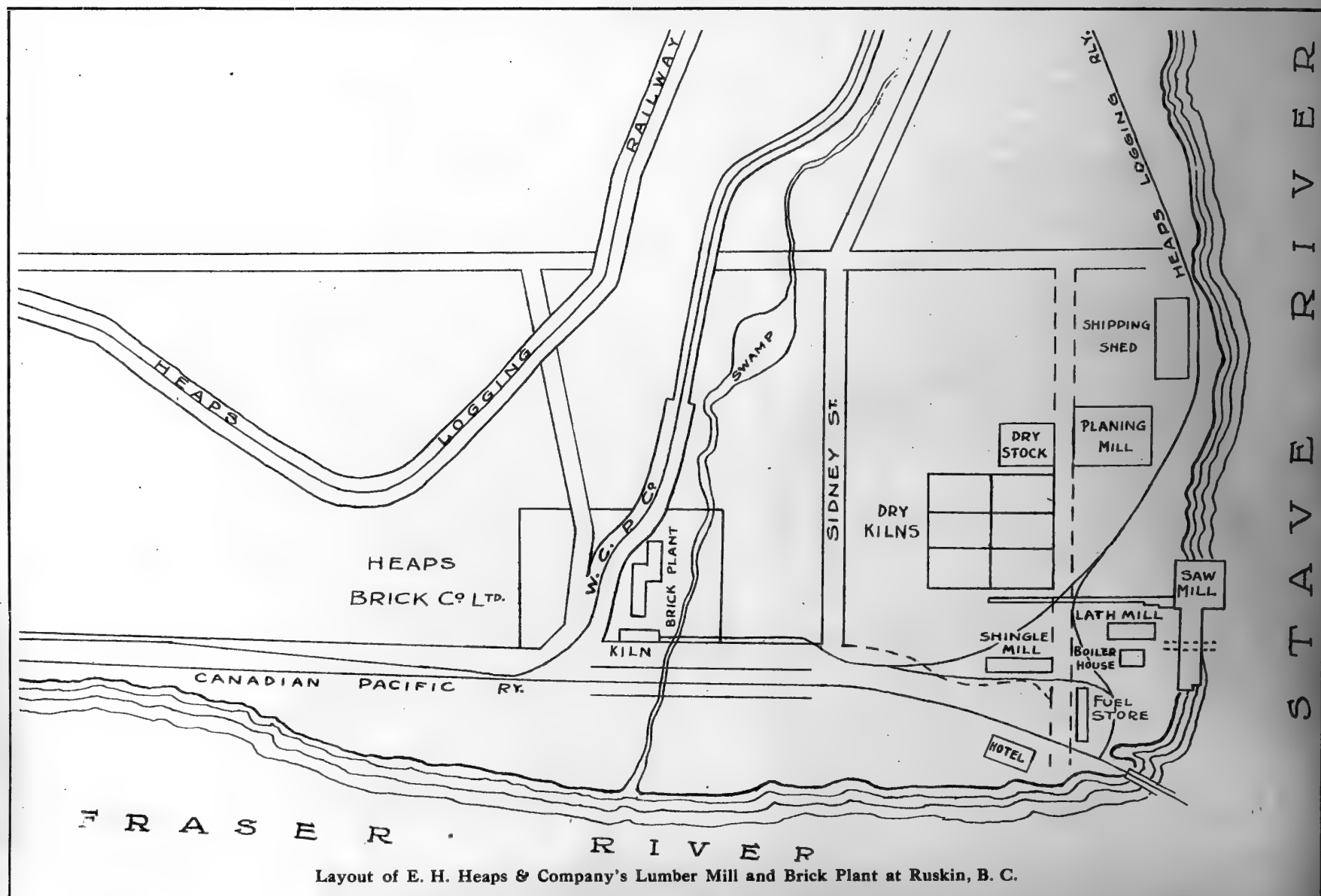
H.P.	R.P.M.	Type	What Drive
50	900	Squirrel cage	Stetson & Ross sizer.
40	1200	Squirrel cage	Roll cases.
30	1200	Squirrel cage	Roll cases.
30	1200	Squirrel cage	Roll cases.
30	1200	Squirrel cage	Fan.
20	1800	Squirrel cage	Pony edger.
20	1200	Squirrel cage	Roll cases.
20	1200	Squirrel cage	Sorting table.
10	1200	Squirrel cage	Conveyor.

The Planing Mill

The planing mill, which is situated some distance from the saw mill, is supplied direct from the 440 volt busbars in the sub-station. Current is controlled by an 800a knife switch and fuses. The cables are installed under the gangway to the planing mill, entering the mill through an 800a knife switch and fuses to a slate panel 8 ft. long and 4 ft. high, front connected and containing the following fuse blocks,—1 set of 401-600a; 1 set of 201-400a; 4 sets of 101-200a; 2 sets of 61-100a; 4 sets of 31-60a; 2 sets of 0-30a. The following motors are connected from the panel; the matchers, moulder, sticker and cut-off saws are direct connected,—

H.P.	R.P.M.	Type	What Drive
75	800	Squirrel cage	Blower fan.
50	1200	Squirrel cage	6 x 15 matchers.
40	1200	Squirrel cage	6 x 15 matchers.
40	1200	Squirrel cage	Berlin resaw.
30	860	Squirrel cage	15-in. wood moulder.
30	850	Squirrel cage	12-in. sticker.
10	1200	Squirrel cage	Rip saw.
5	1200	Squirrel cage	Grinding machinery.
3	1800	Squirrel cage	Swing cut-off saws.
1	1800	Squirrel cage	Knife grinders.

All wiring for power and lights is in conduit, and is carried be-



neath the floor wherever possible to avoid interfering with machinery repairs or alterations. Distribution panels are placed at the most economical points, viz.—close to the largest motor or group of largest motors that each panel controls. The lighting is 110 volt a.c. multiple. Eight distribution panels are carefully located on the different floors, each controlled by a knife switch and fuses on the switch-board of the lighting panel. Each circuit is controlled by a knife switch and fuses and 8-16 c.p. lights is the maximum per circuit. Over sorting tables, carriage edger, slasher, trimmer and live rolls, lights are placed in an inverted trough painted white. The mill having been whitewashed throughout, very little light is absorbed by the walls. The efficiency of the lights is thus greatly improved.

All motors in the sawmill are of Allis-Chalmers-Bullock make. The band mill motor is a three-bearing type. The motors in the planing mill over 5 h.p. are of Allis-Chalmers make. Starters are provided with no voltage release. Motors of 5 h.p. and below were supplied by the Canadian General Electric Company. Every single motor in both mills is protected by a Conduit oil circuit breaker.

Mr. Louis Brodeur, electrical engineer and contractor, of Vancouver, had charge of the complete installation. Mr. G. Lewthwaite, steam and electrical engineer, is now in charge of the steam and electrical plant.

Some Additional Items of Interest

The exceptionally heavy type of construction followed in the erection of the sawmill building is an outstanding feature. The main timbers are 14 x 16 in. with 10 x 12 in. brace supports. The clearance between floor and ceiling of each storey is 12 feet. Hundreds of piles were driven for the foundation, thus assuring the utmost degree of solidity and stability.

The filing room, which is located in the third storey, is 64 x 69 ft.

The original intention was to erect a large water-jacket burner west of the log haul to consume the mill refuse, but this plan was discarded in favor of an overhead conveyor which will carry all mill waste to the furnaces of the brick-making plant about two hundred yards away, thus solving the problem of cheap fuel—a vital point in the production of this class of building material.

The finishing mill is located on the lower floor of the sawmill, so that timber may be taken off sorting table and handled quickly and economically.

On the east of Stave River side of the mill, space has been provided for the equipment required to cut blocks from the log for the shingle mill. The blocks will be dropped into the refuse conveyor for delivery to the shingle machines.

Lumber received from the trimmers is first handled in the extension on the east side of mill. The stock then passes to log haul end of mill and thence out to the sorting table.

The timber decks at the rear end of the mill are specially equipped for the quick handling of all lengths. After passing through the ready sizer the timbers are delivered alongside of the car loading platform.

For a number of years past E. H. Heaps & Company have maintained a large boarding house and general store on the waterfront at Ruskin for the convenience of their employees and residents of the district. When the new plant is in full operation, the population of the town will be close to 1000, which will necessitate the erection of a number of new dwellings. Several streets in the townsite were graded last fall, in anticipation of building operations being commenced early this summer.

A start was made last fall on the work of levelling the ground between the sawmill, brick plant and other buildings. A steam shovel will speedily cut down the half-dozen hillocks, the soil from which will fill up hollows elsewhere.

The construction of a government wharf at Ruskin has been ordered, and will prove a great convenience to the company and residents. The wharf will be erected on the Fraser River frontage below the hotel and general store, and will be a substantial structure. The company's railway line will be extended from the mill yard to that point, so that lumber may be shipped on barges to New Westminster, Vancouver and elsewhere.

For years past E. H. Heaps & Company, Limited, have owned and operated extensive limits up the Stave River Valley, the timber being described as some of the best in the province. The timber is delivered to the mill boom over the line of the Ruskin Logging Railway, which is owned by the company. Already having a considerable mileage of standard gauge track, a large amount of money was expended in 1912 on main line betterments and the construction of branch lines into the timber, as well as the addition of new equipment. Oil burners were also installed in the locomotives and several of the donkey engines, with gratifying results. Over 350 men are employed in the firm's logging camps when operating at full capacity. Edward Heaps is superintendent of this important branch of the firm's business, as well as manager of the Ruskin plant.

Following the erection of the new plant the route of the railway

through the mill site was changed materially. Tracks now serve the brick plant, as well as the loading platforms of the sawmill, shingle mill, planing mill, shipping shed and dry stock shed. The switching of cars to and from the C. P. R. main line, paralleling the townsite, will be done by one of the company's locomotives.

Spruce Waste Available for Pulp

Two Bangor, Maine, men, one a civil engineer and the other a sawmill operator, have perfected a process for the removal of bark from mill waste, which they claim will render the vast quantities of spruce and other slabs and edgings produced by lumber mills, and now of little value, available for the manufacture of wood pulp of the highest grade. The process has been patented, and it is proposed to form stock companies for the purpose of erecting plants at Bangor and other important mill centers in Maine and Canada for the treatment of waste wood and its preparations and baling ready for shipment to pulp mills.

The new process consists in the subjection, first, of the waste wood to streams of boiling water driven at 250 pounds pressure against the material as it is passed through a cylinder or tube. This softens the bark and dissolves the resinous matter by which the bark is firmly attached to the wood. The heat of the water and its great force effectually loosen the bark, and the removal is completed by friction with lugs or spurs. A few shreds may remain attached to the wood, and these are removed by passing the material through an ordinary pulp wood tumbler, where the work is completed by friction. The wood then goes to the chippers and is baled for shipment. Previous to hot water treatment the wood is passed under rolls and drag knives which to some extent loosen and scarify the bark, thus hastening the action of the water.

About 1,000,000,000 feet of logs of all kinds are cut in Maine every year, and of this quantity 800,000,000 feet is spruce. Of the vast spruce harvest, 400,000,000 feet goes to the sawmills, pulp mills taking the other 400,000,000. Careful estimates place the waste of spruce in the process of manufacture into lumber at 45 per cent., or 180,000,000 feet annually. A few mills are so situated that some of their waste can be utilized, either as fuel for the mill furnaces or by sale to wood dealers in cities and towns, but it is said that fully 75 per cent. brings little or no revenue, while often it is disposed of at considerable expense in the maintenance of burners erected for the purpose.

At present the pulp mills of Maine are drawing heavily upon the timber supply of the State and are importing wood from the Maritime Provinces of Canada. Such is the drain upon the Maine timberlands that trees are being cut that would have been allowed to stand in former years, and in that way the future supply is threatened. Statistics of the Penobscot and Bangor booms show that while twenty years ago only seven logs were required to make a thousand feet, board measure, the sticks have lately been running as small as thirteen to the thousand. From this, it is argued by the inventors of the new barking process that the success of the enterprise would not only mean the utilization of a vast quantity of material that now is valueless, but would also be the means of arresting to a considerable extent the stripping of spruce lands of small trees.

If the estimates of mill waste are at all accurate, and 45 per cent. of the log goes into the waste heap, then 180,000,000 feet annually of Maine's spruce supply is of little use except as fuel. If 75 per cent. of this, or 135,000,000 feet, is altogether useless, and can be made valuable by the new bark removal process, then, at the lowest price paid by pulp manufacturers, this by-product would yield a sum sufficient to make its treatment highly profitable and afford the mill operators a new revenue that would tide them over many a dull season. It is said that a bark-removal plant capable of turning out 200 cords of pulpwood daily can be erected for \$30,000, and that several will be built at once.

A New Brunswicker's View About Panama Canal

A view of the probable effect of the Panama Canal on the Atlantic Coast lumber trade, particularly in the New York and New England markets, was expressed recently by A. Fraser, of Fredericton, New Brunswick, who has been on a trip to the Pacific Coast looking into market conditions. Mr. Fraser is at the head of the Fraser Lumber Company, Limited, which is one of the largest concerns in Eastern Canada, shipping large quantities of lumber to markets in which B. C. fir promises to be a sharp competitor. Mr. Fraser visited the West Coast to get first hand information regarding conditions and to learn what preparations are being made to ship to New York and New England. Mr. Fraser gave it as his opinion that the principal effect of fir lumber in Atlantic Coast markets so far as the Canadian mills are concerned, will be to keep prices at a lower level than would otherwise prevail. As a result of the diminishing supply of New Brunswick and Nova Scotia timber, values normally would tend to advance, but this advance could hardly be expected to take place in the face of the new competition of west coast woods.

Labor Statistics of Ontario Lumber Industry

The tables reproduced on this and the adjoining pages are from the report of the Ontario Bureau of Labor for the year ending December 31st, 1913. They show, in an interesting form, the results of the operations in sawmills, planing mills, sash and door factories and woodworking factories, and afford valuable statistics from which to make comparisons in connection with individual industries. It is interesting to note that the largest lumber manufacturing concern making a report, which has a capital investment of \$2,500,000 produced material with a gross value of \$3,418,000. Its average weekly wage was almost the highest paid in the industry, being exceeded only by two others. The wages paid by this company increased during the year by 17½ per cent. A close study of these tables will be found interesting to practically everyone engaged in the manufacturing and working up of lumber products.

An Attractive Millwork Catalogue

A very attractive catalogue of stock millwork specialties has been issued by the Wm. Rutherford & Sons Company, Limited, Montreal, P.Q. The book is published in substantial form with cloth binding and is extensively illustrated. It contains also a valuable assortment of general information regarding lumber and lumber products, as well as a generous amount of blank memoranda pages which are

added at the end of the catalogue. The arrangement of the catalogue is designed in such a way as to make it very serviceable to buyers. It will unquestionably save them much money and thought. All the goods illustrated in the catalogue are "stock" and can therefore be furnished much more cheaply and delivered more promptly than special detail work. The company, however, operate a large plant running all the time on special detail work and are in a position to meet every requirement in wood products. A very complete index is published in connection with the catalogue, which together with the illustrations and information, make it one of the most valuable of its class that has ever been published. The Wm. Rutherford & Sons Company, Limited, are representatives in Eastern Canada for the Paine Lumber Company, Limited, Oshkosh, Wis., a copy of whose catalogue, embracing 150 door designs will be furnished free to architects and dealers.

Sixty million feet of timber and 42 thousand poles are offered by the U. S. Government on the Kaniksu national forest near Priest Lake, Idaho. The timber is said to be of excellent quality and all of it lies within four miles Priest Lake, so that it is readily accessible and can be easily examined by prospective purchasers before the date on which bids are closed, June 1. Except for the pole material, which is cedar, the principal species are white pine and yellow pine. The timber now occupies some 5,000 acres.

LUMBER MANUFACTURERS, SAWMILLS.—TABLE NO. 1.

Office No.	Capital employed, including plant.	No. of days in operation during 1912.	Gross value of products manufactured during year	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.		Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.			Office No.
				Increased.	Decreased.					Male.	Female.	Male.	Female.	Male.		Female.		Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.		
														Skilled.	Unskilled.	Skilled.	Unskilled.									
1	\$ 35,000	150	\$ 25,000	%	%	\$ 150	\$ 200	\$	\$	20		\$ 6,000	\$	\$ 15 00	\$ 12 00	\$ c.	\$ c.			\$	%	%	%	%	1	
2	200,000	250	150,000	no	no	450	2,000			65		27,500		17 25	10 50			1		600	no	no	10	10	2	
3	74,303	305	50,000	10		542	686	745	2,572	52		36,438		21 00	12 75			5	1	5,000	10	no	10	10	3	
4	35,000	75	5,000	no	no	200	40		1,500	8		3,600		34 60	average						no	no			4	
5	893,339	156	403,614	8		1,165	11,609	1,438	290,123	237		87,019		18 18	8 40			5	1	12,260	11		11		5	
6	60,000	100	65,000	no	no	225	2,500			50		10,000		36 00	12 00			1	1	1,200	no	no			6	
7	12,000	260	24,000		20	82	320			16		4,800		15 00	9 90			1		1,200	10	no	10	10	7	
8	7,500	137	13,419	30		39		100		11		3,380			12 00						no	no			8	
9	100,000	170	700,000	no	no	250	5,000		15,000	200		90,000		30 00	13 50			6			no	no			9	
10		175				35				6				12 00	10 50						no	no			10	
11	85,000	300	48,000	no	no	600	1,000	800		45		24,000		18 00	13 50			3		2,800	no	no			11	
12	3,104	92	5,684	no	no	63				5		1,104		15 00	12 00						20		20		12	
13	500,000	300	660,000	6			3,629			200		96,355		30 00	12 00			27	1	36,000	10		10		13	
14	420,000	300	360,000		65	2,526	5,256	35,846	44,536	300		109,643		31 50	15 00			6	1	10,500	5		5		14	
15	100,000	300	92,000			75				400		44,000		19 50	15 00										15	
16	150,000	180	125,000	no	no	560	2,500			50		15,000		24 00	12 00			2		2,000	no	no			16	
17	28,000	300	34,500	no	no		425		15,000	55		16,000		18 00	11 25						5				17	
18	150,000	300	50,000		20	1,200	1,500			50		21,930		25 50	11 25			2	1	3,000	10		10		18	
19	75,000	250	75,000	yes			50			80		30,000		9 40	average			1		3,500	no	no			19	
20	25,000	103	50,000		20	438	248		250	20		28,000		10 50	9 00						no	no			20	
21	9,000	200	4,000		20	19		150		6		1,200		9 60	9 00			2		700					21	
22	25,000	313	15,000	5		78	150		2,000	25		10,250		18 00	8 10			2		960	5		5		22	
23	15,000	100	8,000		yes	60	200			12		1,800			9 00			2		1,500	no	no			23	
24		113	120,000			1,354	2,353	4,819	1,805	120		28,109		21 00	10 50			2		2,935					24	
25	190,000	160	222,218		25	666	4,526		4,039	104		43,077		25 80	10 50			7	1	16,377	no	no			25	
26	8,000	98	5,800	no	no	93	108			9		2,130		15 00	9 00						no	no			26	
27	25,000	250				230	300			5		3,500		15 00	12 00			2		2,000	yes				27	
28	15,000	300	27,000	40		189	410	3,000		12				24 00	12 00			4		1,440	12		12	12	28	
29	71,150	300	147,913	30		857	1,115	1,500		50		31,577		15 00	9 00			3	2	7,114	7½		7½	7½	29	
30	2,000	200	17,000	50			56			4		1,600		15 00	12 00						no	no			30	
31	10,000	130	25,000	75		58	120	500		25		6,500		12 00	10 50						no	no			31	
32	60,000	300	40,000	no	no	256	992		500	20		10,000		18 00	9 75			3		2,000	no	no			32	
33	3,000	30	1,000	40		35		50		10		400		12 00	9 00						no	no			33	
34	3,000	150	2,000			18			800	2		600		12 00	average						no	no			34	
35	200,000	175	1,000,000	yes		6,000	15,000			500		200,000		30 00	11 25			15		30,000	10		10	10	35	
36	125,000	250	175,000		20	618	2,800			80		32,700		27 00	12 00			5		5,100	7		7		36	
37	15,000	110	12,000	no	no	120			5,000	13		3,400		12 00	9 00						no	no			37	
38	5,000	150	5,000		40	150	120	500	100	6		3,000		12 00	9 00						no	no			38	
39	200,000	300	50,000		25	800	6,000			75		30,000		27 00	11 25			3	1	6,000	no	no			39	
40	25,000	300	175,000	no	no		700	5,000		12		7,000		10 00	average						5				40	
41	65,000	300	400,000	15		1,382	1,770		5,953	50		30,533		19 50	12 00			6	2	7,391	5		5	5	41	
42	100,000	313	223,437	9		433	4,386		25,000	200		109,550		18 00	10 50			5		6,680	10		10	10	42	
43	12,000	100	14,000			14	70			9		1,800			12 00						no	no			43	
44	18,000	300	25,000			107	346	760		4		1,625		12 00	9 00						yes				44	
45	15,000	150				150	6,000	5,000		5		1,200		10 00	average						no	no			45	
46	4,000	200	5,000	no	no	50	80			6		1,200		10 50											46	
47	5,000			no	no	40	20			4															47	
48	100,000	100	60,000		20	400	5,000			75		30,000		27 00	10 50			3		6,600	no	no			48	
49	30,000	300	36,000	no	no	140	390		150	8		1,796		10 50							no	no			49	
50		200	10,000	no	no	120	100			15		6,000		13 50	12 00				1	400	10				50	
51	3,000	300	5,000		20	150	115		350	6		2,800		9 00							10				51	
52	15,000	100	80,000	yes		16	140			15		5,000		20 00							20				52	
53	300,000	162	400,000			1,940		15,400		145		45,100		11 00				4		6,420					53	
54	27,000	138	22,157	10			300	500		20		5,550		13 32	average				1	200	no	no			54	
55	10,000	175	11,000		20		178			12		5,950		15 00	9 90										55	
56	1,000,000	180	600,000	no	no		2,386	5,000		250		145,000		19 33	average			5		4,500	10		10	10	56	
57	40,000	305	100,000	20		180	800	1,500		75		45,000		12 00	average			3		2,760	10		10	20	57	
58	15,000	305	12,000	25		14				10		4,000		11 40	average				1	500	yes				58	
59	2,500,000	313	3,418,000	no	no	55,000	35,000	150,000	25,000	2,250	6	1,500,000	2,480	34 50	11 52		6 75	25	1	50,000	17½		17½	17½	59	
60	100,000					400	504	5,000		10		8,500		18 00	12 00			3		3,350	no	no			60	
61	30,000	300	3,000	50																						

CANADA LUMBERMAN AND WOODWORKER

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PLANING MILLS, SASH AND DOOR FACTORIES, ETC.—TABLE NO. 2.

Office No.	Capital employed, including plant.	No. of days in operation during 1912.	Gross value of products manufactured during year.	Production during year.		Taxes paid during year.	Insurance paid during year.	Amount expended on permanent repairs or plant enlargement.	Other uncontrollable expenses.	Total No. of employees, wage-earners only.		Total wages paid during year to wage-earners.		Weekly wages paid.				Total No. salaried clerks and officials.		Total salaries paid to clerks, officials, etc., during year.	Wages during year have—		Class of employees affected.			Office No.
				Increased.	Decreased.					Male.	Female.	Male.	Female.	Male.		Female.		Male.	Female.		Increased.	Decreased.	Wage-earners.	Clerks, officials, etc.		
														Skilled.	Unskilled.	Skilled.	Unskilled.									
70	\$ 63,000	295	\$ 402,897	17	%	\$ 980	\$ 1,715	\$	\$ 327,856	45		\$ 31,530	\$	\$ c. 18 75	\$ c. 11 00	\$ c.	\$ c.	6	2	9,237	%		%	%	%	70
71	10,000	250	7,500	no	no	21	90			8		3,750		12 75	10 50						12 1/2					71
72	289,400	300	500,000	40		2,000	3,684		13,077	240		117,000		23 25	12 75			10	2	13,000	10		10	10		72
73	58,500	300	38,350	25		92	540		5,820	14		5,713		12 00	9 00			2	1	4,837	15		15			73
74	150,000	311	248,000	13		1,609	4,200	4,800	2,500	75		37,284		18 75	10 80			5	1	7,800	10		10	10		74
75	20,000	305	55,000	30		160	400			12		6,600		17 25	12 75						10					75
76	75,388	300	129,690	20		468	1,800			65		23,299		18 00	10 50			1	1	1,365	20		20	20		76
77	10,000	250				113	100	1,500		5		3,200		18 00	12 00											77
78	110,000	300	112,000	12		400	1,900	4,000	1,700	50		29,500		21 00	9 00			3	1	4,000	8		8	8		78
79	118,000	290	184,379	25		270	1,325		1,475	70		28,864		13 95	7 50				2	884	10		10	10		79
80	25,600	300	63,800	9		384	1,550			17		19,850		25 50	21 00			3		5,100		3	3			80
81	65,000	305	150,000	15		423	489	3,200		14		9,360		21 00	12 00			2	1	2,184	10		10	10		81
82	11,526	295	44,400	7		193	450	125	805	9		5,667		21 00	13 20			2		1,500	no	no				82
83	75,000	300	140,000	15		550	500	4,000		50		29,000		15 00	12 00			2	1	2,500						83
84	10,000	60	8,000		25	31	100	100		15		925		18 00	9 00						10		10			84
85	50,000	280	25,000	12 1/2		240			1,000	25		10,000		18 00	9 00						12		12			85
86	150,000	305	25,000	25		820	56	2,400		38		25,700						2		1,200	10		10	10		86
87	130,000	300	150,000	no	no	904	1,397	5,000		58		40,000		17 00	11 00			4	1	6,000	5		5			87
88	8,000	300	7,500	10		110	200			7		4,680			12 00						15					88
89	50,100	313	61,700	no	no	155	575		2,315	30		10,949		18 00	10 50			4		2,996	no	no				89
90	75,000	300	125,000	no	no	637	2,700		100,000	90		35,000		18 75	10 50			9	1	7,500	15		15	15		90
91	15,000	200	10,000		10	52	105	350		3		1,400		12 00	9 00			1		600	10		10	10		91
92	300,000	150	200,000	yes		750	11,000	2,000		112		46,000		31 50	12 75			5		4,000	no	no				92
93	200,000	300	55,000		2	1,189	2,031	1,500	50,000	60		41,433		16 50	9 78			10	3	10,700	2		2	2		93
94	25,000	300	30,000	no	no	300	400	1,000		40		15,000		15 00	9 00			2		1,500	no	no				94
95	30,000	305		yes		100	400	1,000		8		4,200		13 50	9 00			1		600						95
96		305		20		110	85			6		3,100		10 34	average			1		600	13		13			96
97	150,000	300	188,000		15	1,600	3,000	2,000	4,000	100		60,000		16 20	12 00			5	2	8,000	20		20			97
98	10,000	312	10,000	10		68	17	50		5		1,500		12 00	6 00						20	yes				98
99	4,000	150		yes		40		300		4				9 00												99
100	15,000	285	8,000	no	no	150	200	200		5		2,000		14 00	average						10					100
101	150,000	305	250,000	17 1/2		600	1,200			48		30,000		24 00	10 50			3	1	5,000	10		10			101
102	25,000	313	60,000	10		150	175			10		8,000		18 00	12 00				1	450	15		15	15		102
103	1,200	15				250																				103
104	15,000	250			20	52	162	300		3		900		12 00	9 00			1		600	no	no				104
105	20,000	305	10,000	no	no	190	8,000			10		6,000		18 00	9 75			1	1	1,560	no	no				105
106	12,000	305	20,000	no	no	74	400			6		3,000		13 50	10 50						10		10			106
107	25,000	290	40,000	10		300		200		20		18,000		24 00				2		2,000	no	no				107
108	30,000	300	50,000	25		289	291			10		5,242		21 00	12 30			1	1	1,568	yes					108
109	5,000	300	10,000	20		35	50	400		5		2,400		15 00	12 00						10					109
110	3,000	150	3,200			43				2		216			9 00						no	no				110
111	800	30								9		425		9 40												111
112	10,000	306		no	55	75	500			3		2,080		1,500	10 00						5		5			112
113	4,000	250	4,000	2		72				3				1,600	12 00						no	no				113
114	16,000	309		no	no	71				2		1,000		10 50							no	no				114
115	100,000	300	290,000	10		880	960	1,800		50		33,000		18 00	12 00			4			5		5	5		115
116	800,000	305	616,067	25		620	5,822			80	4	48,757	1,700	17 50	9 75	11 00		5	4	6,600	5		5	5		116

WOODWORKING FACTORIES, SPECIALTIES IN WOODENWARE.—TABLE NO. 3.

117	6,000	200	10,000	yes	33	200	6	1,500	10 50	8 40				10		10			10						117
118	510,498	295	378,220	18	1,000	720	110	15	79,960	4,501				17 50	9 00	9 00	5 50	12	10	17,009	6		5	10	118
119	26,978	302	92,486	14	270	1,498	160		18,111					21 00	10 50			5	2	9,400	4		4	4	119
120	10,000	250	144,500	30	670	3,154	75		24,720					20 25	18 25			5		5,150	10		10	10	120
121	6,000	300	8,000	no	90	46	3																		121
122	5,850	312	6,825	5	73	201	8		3,725					10 50	7 00						7 1/2				122
123	129,000	300	134,580	20	273	1,470	110	16	43,716	3,650				28 50	9 75	6 00		3	1	4,500	no	no			123
124	5,000	300	8,000	10	133	44	4		3,600					18 00							10				124
125	35,000	300	30,000	25	275	650	30		12,000					12 00							20				125
126	41,000	270	75,000	yes	360	300	33	4	19,000	both				16 50	9 00			1		1,500	10		10	10	126
127	50,000	280	60,000		144	1,209	66		34,867					19 50	12 00			2	1	3,000	7 1/2		7 1/2	7 1/2	127
128	15,000	295	35,000	12	200	480	30	1	21,000	450				18 00	13 50	9 00		2	1	2,600	12 1/2		12 1/2	12 1/2	128
129	11,700	285	32,000	no	64	469	34	5	13,710	998				10 50	7 50		4 20	2	1	2,660	10		10		129
130	28,873	275	112,000	55	177	710	12	12	4,975	2,520				18 00	4 50	6 50	4 50	2		4,500	6				130
131	10,000	225	8,500	20	45	30	13		3,000					9 75	6 75						17 1/2		17 1/2		131
132	75,000	175	35,000	25	175	1,450	45		10,000					19 50	12 00			2		1,050	13 1/2				132
133		280		no	90	517	35	1						15 00	9 00	7 00		3	1	5	5		5	5	133
134	20,000	305	35,000	25	60	100	10		5,000					18 00	12 00			1	1	3,500	yes				134
135	40,000	305	97,400		186	1,269	48		28,283					16 20	9 00			7	2	9,652					135
136	75,000	300	106,482	5	464	1,110	45		18,760					8 30	average			2		2,280	5		5	5	136
137	100,000	300	180,000	15	537	582	58	20	25,475	both				15 25	9 00	7 00	5 25	8	5	12,000	5		5	5	137
138	85,300	300	91,262	50	325	300	20	12	12,617	4,072				15 00		7 80		3		7,338	yes				138
139	7,000	300	19,000	no	32	300	25	2	11,000	500				12 00	9 00	6 00									139
140	100,000	305	100,000	no	340	1,650	90	20	46,542	both				19 50	11 25	7 50	5 70	3	1	1,500	5		5		140
141	3,000	300	10,000	no			5		2,800						750										141
142	2,500	300	6,000	no	30	26	6		3,500					27 00							10		10		142
143	35,000	300	135,000	25	134	210	7	30	12,000	both				6 50	average	for all		14	2	16,000	no	no			143
144	50,000	305	153,000	2	807	2,250	75		21,560					15 00	10 50			2		2,200	10		10	10	144
145	10,000	312	12,500	no	80	100	6		1,800					9 00	6 00					10					145
146	2,000	300	3,000	20	30	30	3	1	1,500	300				10 00		6 00				10					146
147	25,000	300	14,000	no	650	75	5		3,730					17 00	8 00			1		1,800	no	no			147
148	157,500	312																							148
149	30,000	305	51,800	81	270	400	10		4,600					8 11	average			1	1	780	29				149
150	50,000	125	20,000	10	263	1,250	50		9,000					19 50	10 50			1		600	8		8	8	150
151	50,000	300	60,000	no	474	425	36		18,500					10 30	average						8				151
152	5,000	260	5,250		35	47	4		2,000					12 00	9 00						1/2				152
153	700	200	935	10		4																			153
154	40,000	100	100,000	no	150	2,000	50		12,000					24 00	12 00			4		3,600	yes				154
155	20,000	306	30,000	no	272	240	20	1	11,500	300				11 35	11 35			2		1,450					155
156	5,017	280	10,385	25	7	20	10		6,991					21 00	7 50			1			25		25		156
157	90,000	300	80,000		25	500	40		20,000									1	1	1,300	10		10	10	157
158	30,000	300	110,000	10	40	486	32	7	13,342	1,890								5		4,400	5		5		158
159	12,900	305	8,000		38	160	8		3,200									2		1,200					159
160	20,000	300	40,000	25		509	45	4	21,840	1,560				16 50	9 00	10 00	7 50				12 1/2		12 1/2		160
161	203,330	288	188,800	10	640	1,122	110	12	52,616	4,320				15 00	10 50	9 00	6 00	6	2	9,150	same				161

Results of Ontario Timber Sale

The Ontario Government sale of limits in the Mississauga Reserve which was held by tenders received up to February 27th, resulted as follows:—

Berth "B," 36 miles, was sold to the Spanish River Mills Company. Standing pine \$6.55 per thousand feet B.M. Blown down pine \$3.15 per thousand feet B.M. Both in addition to dues of \$2.

Berth "N," 36 miles, was sold to Booth & Shannon. Standing pine \$5.05 per thousand feet B.M.; blown down pine \$2.05; both in addition to dues of \$2.

Berth "K," 36 miles, was sold to the Spanish River Lumber Company. Standing pine \$3.25 per thousand feet B.M.; blown down pine \$1.25; both in addition to dues of \$2.

Berth "M," 36 miles, was sold to Spanish River Lumber Company. Standing pine \$6.55 per thousand feet B.M.; blown down pine \$3.15; both in addition to dues of \$2.

Berth "O," 36 miles, was sold to the Massey Lumber Company. Standing pine \$5.15 per thousand feet B.M.; blown down pine \$1; both in addition to dues of \$2.

Burwash Lake was sold to the Aird Island Logging & Trading Company. Standing pine \$7.15 per thousand feet B.M.; blown down pine \$3.25.

Joints for Belt-Sander Belts

Making a joint in the belt on a belt-sanding machine is a matter of great importance for the probable operation of the machine. The chief points to be sought in such a joint are discussed by W. S. McConnell in an article in the Abrasive Age, published by the Carborundum Company, Niagara Falls, N.Y., from which the following extracts are made:

First of all, it is essential that the joint shall not break or become loose, or tear out. Secondly, the joint must be so made that the belt can be run in either direction and must be as thin and flexible as possible. Having given this subject a great deal of attention, I have found that a butt joint, reinforced with cloth, produces very satisfactory results.

It is optional whether this joint be square or on an angle, but I believe I am safe in saying that a joint cut on an angle is the most popular for belts up to eight inches in width. For reinforcement, a cloth having the same thickness and texture as that used in making flour bags, is preferable, while for wider belts, a cloth similar to that used in making overalls, is satisfactory. Of course, the starch should be washed out of the cloth before it is used.

For a joint on a belt six or eight inches wide, the width of the cloth should be about three inches. First of all, cut the paper to the right length and then bring the two ends together, tacking them down on a board, grain side down. Then apply the glue to the paper, having the cloth about three inches longer than the width of the paper.

Place this cloth over the glue, and then take two pieces of veneer, three inches long and two inches wide, and with these scrape all the surplus glue out of the joint, being careful to remove all wrinkles. This scraping forces the glue into the paper and through the cloth, producing the flexible joint so much desired.

The selection of cloth for making the belt joints, and the scraping of the surplus glue out of the joints, are two points far more important than the average sanding machine operator is willing to concede.

After the wrinkles and the surplus glue have been removed, place a piece of newspaper over the cloth, and then lay a board on top before putting between clamps to dry. When thoroughly dry, the edges of the joints should be trimmed.

A good method is to make enough belts on Saturday to last through the following week, and after being made they should be hung up on pegs ready for use. In no case should they be rolled up in small rolls, for it is almost impossible to roll a sanding belt without cracking and weakening it, which shortens its life considerably. Any good hide glue will answer for making joints providing it is of the necessary consistency.

After a new belt has been run for a few hours, it should be removed, turned around and then run in the opposite direction. This will add to its life as well as its cutting qualities, and is a practice followed by all experienced operators.

On belts that are 15 or 18 inches wide, or even wider, and which are used on what is called the table type of belt-sander, the joints are often cut in V-shape or rather having point well rounded more like U, or a modification of these. Where this style of joint is used, it is necessary to make a templet to cut by; outside of this its construction is the same as that of the joints described, and there are numbers of operators who claim wonderful results from this type of joint.

Joints made on cloth belts in the woodworking trade, are commonly known as lapped joints. These are made by removing the grain from one end of the belt and applying the glue, while the other end is

brought up and clamped down on the glued edge. The grain is removed by moistening and scraping.

If left to dry by itself, the cloth will wrinkle, and this can be overcome by having a flat piece of iron heated and used to lay on where the grain has been removed, using this iron in the same manner as you would a flatiron.

If trouble is experienced by a joint drawing during the drying process, this can be overcome by placing a strip of wire fly-screen on the cloth side of the joint when putting it in the clamps to dry. This wire screen will come off easily when the joint is removed from the clamps.

The same joint as used on paper belts may also be used on the cloth belts. Users of the cloth belts in the woodworking trade generally buy their cloth in 14-inch rolls, using this for belts 14 inches wide and then tearing into various widths to meet other requirements.

Trade Outlook at Brantford is Fair

Editor Canada Lumberman: Brantford, Ont., March 21st.

For the year just ended, our business shows a falling off of ten per cent. in volume. The outlook at the present time is fair. There are quite a number of buildings to be put up as soon as spring opens. As regards collections, we have been very fortunate, and in this connection everything is in good shape. The prices of stock are about the same as they were a year ago. We are not carrying quite as much stock as we did a year ago. It is about fifteen per cent. less.

The farming community seem to have plenty of money, and the only parties with whom we have any difficulty whatever, are a few speculative builders.—The Schultz Bros. Company, Limited.

A Time to Smile—But also Watch Conditions

Editor Canada Lumberman: Toronto, March 23rd.

Business is not up to that of last year, for two reasons, weather and finance.

The outlook is fair to good, but does not warrant any business extensions.

The price of stock is steady, but will not advance, and on hemlock is sure to fall slightly, when the new cut is ready for shipment. Farm trade is steady and will be up to that of previous years on account of the good returns obtained by farmers last year.

It is a time to smile, but not forget the financial, political and economic conditions which are below par.—W. C. Charters.

All is Encouraging at Acton, Ont.

Editor Canada Lumberman: Acton, Ont., March 24th.

Our business for March of this year exceeds that of any previous year. The outlook is good for the coming season. Collections are up to an average. Farmers are prosperous and their credit is A1.

The town of Georgetown is having a steady growth with all industries working. Fourteen houses are already under contract to be erected this year and many more are talked of. Acton trade is in a good, healthy condition. There will be a heavy cut of hardwood at all the local sawmills.—J. B. Mackenzie.

Berlin Trade Less Active, but Encouraging

Editor Canada Lumberman: Berlin, Ont., March 20, 1914.

The prospects this spring are not quite as promising as last year. We have not as many orders on hand as we had last year at this time, although we expect things to brighten up, because we have been getting a number of new industries that will employ a number of hands, who will naturally require homes. There is an agitation at present for the building of a number of workmen's houses in this city. This will help trade considerably.

We have found collections fairly good during the past year.

The price of stock has shown a slight advance in some of the factory materials but yard stocks are at the same levels as last year.—H. J. Hall & Son.

A resolution was recently passed by the Vancouver Board of Trade, endorsing the action of the Minister of Lands of British Columbia in his endeavor to induce the Canadian Minister of Trade and Commerce to appoint a special committee to investigate the lumber trade, and to assist in the development of the trade in lumber with South America, Africa and Asiatic countries. The Board of Trade took this step at the suggestion of Mr. R. H. H. Alexander, secretary of the British Columbia Lumber & Shingle Manufacturers' Association.

George Matthews, timber buyer of the Chicago, Burlington and Quincy Railway, was in Vancouver recently, arranging for the submission of tenders for 3,000,000 feet of fir timber to be used in the company's shops at Kansas City and Omaha. The fir is wanted because of its strength.

An Electrically Driven Saw Mill

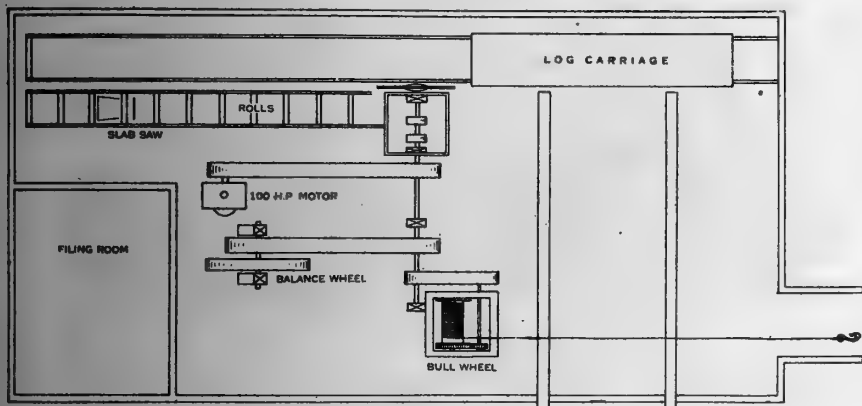
Nearly all the publications devoted to wood-working have given a great deal of space to motor-driven machines, and no doubt most of our readers are familiar with their work on planers, band saws and small circulars. However, I have seen very few articles on motor-driven board saws, or rotary saws, as they are generally called.

On account of the large diameter of the log board saw most manufacturers of motors will not advise using motor drive. Five years ago last fall the writer built a small sawmill, six miles from where our factories are located, in order to saw the logs near where they were cut and to stack the lumber until it was seasoned before drawing same to the factory. It was the intention to install a portable boiler and engine for power.

One day, when driving up to the location to get ready to build, I noticed the electric wires that brought the current to light the village, sixteen miles from where the power was generated by water power. It struck me that if we could get power it would be a great thing, as there would not be as much danger from fire as there would be from a boiler. We took the matter up with the village trustees, who controlled the power plant, and found them very anxious to let power, as they had day service and a very light load. They agreed to let us have power at the rate of 12c per h.p. for ten hours, we to install a 500-volt, 75-h.p. motor.

We went ahead, built the mill and installed a rotary board saw, using 52-in. inserted-tooth saws. In setting up the mill we had the arbor for the saw made 13½-ft. long, so we could set the motor outside of saw frame and belt to same. We had a bull wheel similar to a hoisting rig, with a 36-in. spur and drum, 16-in. diameter, and a 7-in. pinion. The pinion shaft had a 30-in. pulley and was belted to the board saw arbor to a 10-in. pulley, with a tightener to raise and lower, as it was desired to draw the logs up the slip, which was done with a ½-in. wire rope.

We sawed as many logs as possible from the ways as they were



Layout of an interesting electrically-driven Sawmill

rolled into the mill, and the balance were left in rollways extending 250 ft. back of the mill. When the ways were clear of logs we used the cable to draw them from the piles to the mill, saving the expense of a team, which is usual around most portable mills.

The motor which we installed was 75 h.p. and was set under the mill 5 ft. below and 13 ft. from the board saw arbor and belted from motor to arbor. Underneath the saw was constructed a sawdust carrier, which we find in most cases more desirable than a blower, as it takes less power to drive. This carrier was belted from board saw arbor to shaft below, using a pair of spur gears to reduce the speed of carrier, which extended 100 feet beyond the rear of the mill. There is also a 20-ft. shaft running lengthways of the mill, which is belted by a quarter-twist belt from the saw arbor. At the other end of this shaft is a slab saw, which swings up between the rolls and cuts the slabs 16 feet long, and they drop through the floor into the dump sled, where they are drawn out to be piled.

We started this mill up and sawed all winter and it did fair work, but found the motor would lag when saw was in a large log, making the power very unsteady, partly due to the governor on the water wheel where the power was generated, and the balance due to there not being power enough to keep up the speed in large logs. It also had a bad effect on the lights in the village six miles away. We sawed out a little more than 1,000,000 feet the first winter.

When we started up the second winter the people in the village where the power was owned put up a great kick to the trustees and we expected the power would be taken from us. We asked for time to try a balance wheel, which was installed under the mill near the motor, belting back from saw arbor, which runs 750 r.p.m. The balance wheel is 5 feet in diameter and runs 4,500 feet per minute, rim speed. The belt from the balance wheel is quite slack and a tightener pulley is on top of same. We found, after we got started, that when we struck a large log the tightener would descend and the balance

wheel gave us power enough to drive it through without lagging enough to be noticed. The result was we were allowed to use the power, as it did not affect the lights as formerly and caused no inconvenience to the people.

The logs sawed are spruce, fir, hemlock, bass, birch, beech, ash and maple, and any lumberman knows what it is to saw mixed logs in hard winter weather. I have had a great many letters from other mill men who had installed motors and had their troubles, and sent them a sketch showing how I installed my balance wheel. Since then I have received letters from them thanking me for the information and saying they had adopted my idea and were getting fine results.

Our experience shows it is far better to install a large motor. It costs a little more for the motor, but less for the current. After running this mill four winters we installed a 100-h.p. motor, and find the cost per thousand feet less than before. I have gone into all the details of showing how this mill was constructed, as some condemned my method of belting everything from the board saw arbor, which had four bearings, but our five winters' work has proved to me that this is a success, and the mill is still running.

Following is the expense per thousand feet, log scale, for manufacturing lumber and lighting the mill:

Winter of	per 1,000 ft.	Electric power per 1,000 ft.
1908 and 1909	\$2.69	\$.43
1909 and 1910	2.33	.44
1910 and 1911	2.80	.46
1911 and 1912	2.53	.41 7/10
1912 and 1913	2.70	.23

The first figures include the electric power, but I have also given cost of the electric power per thousand feet separate, so the reader can see what it would cost him by comparing the price we pay per horse-power with what he can purchase it for. Our operating expense included all the labor, such as scaler, log-rollers and staking the lumber, and has proved very satisfactory, as there is no engineer or watchman to pay and we are able to sell the sawdust and slabs. Out of five small mills that we are running, this electric mill is the best paying of them all. If I were setting up a new electric mill I would have a motor built with shaft extending out on opposite side of the pulley, so I could place the balance wheel on same and have an outer bearing to support it. It would give the same results that I am getting now, but with less shafting and pulleys. Our last year shows only 10c per thousand feet less than 1911, but there is an advance in labor, which makes the difference. E. E. D., in the Wood-Worker, Indianapolis.

Liverpool and Manchester Stocks

Stocks of spruce, pine and birch at Liverpool and Manchester on March 2nd are reported by Messrs. H. W. Lightburne & Company, Liverpool, as follows:—

	Spruce and Birch								
	Month Ending 28th February, 1914								
	Liverpool			Consumption			Stock		
	Import	1912.	1913.	1912.	1913.	1914.	1912.	1913.	1914.
N.B. & N.S. Spruce									
and Pine, Stds.	1,980	1,800	1,540	2,900	1,380	2,550	3,810	3,010	5,730
Birch Logs, Loads	0	240	20	120	220	40	200	800	120
Birch Planks, Stds.	152	230	97	206	255	188	412	674	521
	Manchester								
Spruce, Stds.	1,660	1,460	1,030	3,160	2,260	2,910	8,240	7,550	12,430
Birch Logs, Loads	0	0	20	40	100	80	60	340	240
Birch Planks, Stds.	30	6	55	91	36	97	12	479	436

Stocks in Manchester and Liverpool Combined

	Spruce					Birch Logs					Birch Planks				
	1910.	1911.	1912.	1913.	1914.	1910.	1911.	1912.	1913.	1914.	1910.	1911.	1912.	1913.	1914.
Manchester	8,200	8,080	8,240	7,550	12,430										
Liverpool	5,040	5,370	3,810	3,010	5,730										
	13,240	13,450	12,050	10,560	18,160	Stds.									
Manchester	140	0	60	340	240										
Liverpool	280	240	200	800	120										
	420	240	260	1,140	360	Loads.									
Manchester	1,024	0	12	479	436										
Liverpool	600	230	412	674	521										
	1,624	230	424	1,153	957	Stds.									

In oiling machinery, particularly the bearings of cutterheads and spindles, I always make it a rule to see that it is done ten or fifteen minutes before quitting time, says an old hand. The bearings are then warm and will easily take oil and be ready to start promptly the following morning at the sound of the whistle. It doesn't take any more time to oil the machines this way and the possibility of hot boxes is considerably less. Bearings that are oiled in the morning when they are cold, I have found to be much more likely to run hot than bearings oiled the night before when they are warm.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

A Useful Belting Catalogue

An interesting catalogue in booklet form, under the name of "The Main Drive" has been issued by the Federal Engineering Company, Limited, Toronto and Montreal. Belt users of all kinds will find this book of much use in the solution of their belting problems. In all cases where belting is used, either for transmission or for conveyor purposes, the book will prove of interest and value, as it contains a great deal of important information, plainly and briefly put. The Federal Engineering Company, Limited, handle Scandanavia, Lanco Balata and Teon beltings, also Saffron Tanned Leather and Conveyor belts. Interesting descriptions are also given in the catalogue of the material and method of manufacture used in connection with these belts. A large number of illustrations are included and the book also contains valuable information relating to belt lacing, the h.p. transmitted by belts and the driving powers of different varieties of belts.

A Record Cross-Cut Saw

E. C. Atkins & Company, Indianapolis, Ind., have just delivered to the Rodney Burns Redwood Novelty Company of Eureka, Calif., the largest cross-cut saw that has ever been made, so far as they know. This saw is 22 ft. 3 in. long and is finished with the Redwood King pattern of tooth, which is exceedingly long and slender and particularly adapted to sawing that class of timber. The saw was made specially for cutting and falling a redwood tree 20 ft. in diameter. A log 30 ft. long will be cut from this and shipped in sections to San Francisco, there to be formed into a log and stump house as a part of the Humboldt County exhibit at the Panama-Pacific Exposition in 1915.

On account of the excessively large diameter of the tree, it was necessary to order a special saw which would permit of supplying the necessary log without the use of an axe. In the use of a saw of this size, it will be necessary to employ two men on either end. The saw will also be exhibited in connection with the log which will be cut at the Panama-Pacific Exposition.

The accompanying illustrations represent a new departure in the manufacture of swages which is of much importance to all lumber manufacturers. The Breeze-Dennison Company, Newburgh, Ont., who have been in the lumber manufacturing business for many years realized long ago the importance of certain improvements in the design of saw swages and worked upon them until they have now turned out in their own plans a swage which gives them the results which they have been seeking for some time. The chief innovation in this swage consists in a change in the die, which in most types of swages is one solid piece, working on an eccentric principle. In the Breeze-Denison swage the die is made of one solid piece which is slotted in the centre to allow the use of three rollers. The main roller which comes in contact with the sawtooth revolves on the second roller, which in its turn revolves on a third roller. The latter two rollers taking the load and thus permitting the swage roller to revolve easily, thereby entirely eliminating friction.

The swage is also equipped with a new type of clamping screw which works rapidly on a coarse thread sleeve until contact is obtained against the side of the tooth, after which a fine threaded screw comes automatically into play and gives the required amount of clamping pressure. The idea of this feature is to allow the clamping screw to open wide enough to permit the swaged tooth to pass freely between the points of the clamp screws, thus making it possible to slide to the next tooth without having to let go of the handles of the tool. This device also allows the clamping screw to be released without any perceptible effort, thus saving the operator many an injured knuckle.

The chief object which the firm of Breeze-Denison had in mind in getting up this swage was to enable them to obtain stronger corners on bandsaw teeth, and in this way to be able to use much thinner saws in manufacturing their lumber. They have also worked out a swage for use upon circular saws, which will be placed upon the market in the course of a few weeks. A shaper to be used in connection with these swages is also being designed which will be placed upon similar principles in regard to the clamping devices. This also will probably be upon the market in the near future.

Elementary But Important Saw Facts

The Editor of Berlin Quality recently received the following interesting letter from one of his readers:—

"This happened last winter. I was filing a mill in Minnesota last winter, sawing mostly hardwood which came to us on cars. The only trouble I had with my saws was that they soon lost their edge. The logs came onto the deck covered with ice and snow with more or less gravel and grit frozen to them.

"We found by using hot water, furnished by an injector, that practically all the ice and grit could be removed on the car. When the logs were washed clean they were brought into the mill. The saws retained an edge longer and the sawyer had less general trouble. If any other mill has the same trouble I advise them to try this.

"Another time I was called to a certain mill where they were having trouble. When I got there I thought I would have some fun with the foreman, and asked him for a job, not telling him who I was. He asked me if I knew anything about resaws and I replied modestly that I did. Imagine my surprise when he said:

"We are having trouble with our resaw. The man that sold it to us said we could run a saw three months without changing. I've about made up my mind he's a liar."

"I did some general educational work in that mill. The first thing I did was to tell the boss that he, I, nor any other human being couldn't run a saw three months without changing. When I told him the saw should be changed twice each day he thought I was joking. But I proved to him that I knew what I was talking about. The last day I was there they resawed 42,000 feet of 5-4 pine on that resaw in 9½ hours. I heard the other day that that boss was looking for a job. I'm not surprised."



An Important New Departure in Swages and Shapers—By the Breeze-Denison Company, Newburgh, Ont.

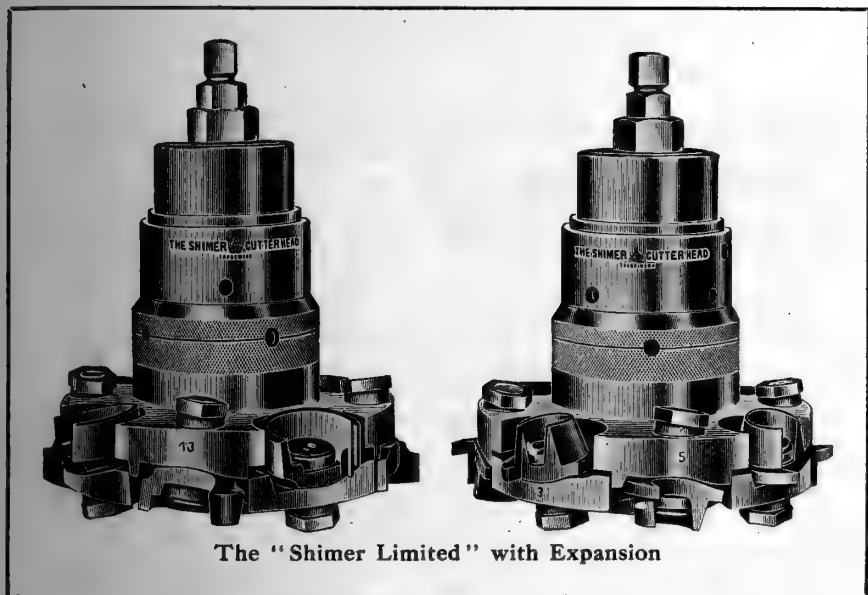
Development of Side Heads

The use of hard woods in house-finishing and other lines has been constantly growing for many years, until now nearly every section of the country is contributing some wood of a hard or tough nature for this purpose. The fact that these woods take a handsome natural finish and are more serviceable, especially for flooring, has rooted them so firmly in the popular demand that we doubt if they will ever go out of use. How to work them economically with the tools at hand has, however, been a serious problem with the woodworker who desired to turn out good work at a fair margin of profit.

To meet this demand and to keep up with the race for supremacy among the makers of fast feed flooring machines, the manufacturers of the Shimer Cutter Heads brought out the line known as the "Shimer Limited." These tools possess many features of special merit and are made with four, six, eight or twelve bits to each head to suit the matcher upon which they are to be used, the feed desired and the kind of material to be worked.

In appearance the "Shimer Limited" series of Cutter Heads resembles the older patterns of these famous tools, but differs therefrom in the method of attaching to the spindle; in the construction of the bit seats; of the bit designed for faster cutting; in the greater strength of the holding bolts, and in the self-centering device which clings to the spindle when drawn up, securing it firmly thereto.

The spindle gripping device is positive and effective in its purpose of holding fast to the spindle, as also in centering the head for



The "Shimer Limited" with Expansion

a more uniform action of the cutters. This is accomplished by having the central bore of the head tapered and having a rotatable cap and nut fitted in the upper portion. Into this bore a taper collet projects, having an upper threaded portion fitting the rotatable nut. When the top nut is drawn up the collet contracts and binds itself firmly to the spindle. This device is simple and effective and one not likely to get out of order. The various parts are made of good steel forgings and the collets are hardened and ground true to size. The entire construction of this tool is the finest, both in workmanship and material.

The bit seats in these heads carry a larger surface, and the bit chambers are of greater depth, to compensate for the new acute angle given to the bits for greater relief to the parts coming in contact with the lumber. The holding bolts have been strengthened several times over by the use of a high grade steel especially made for the purpose.

All cutting bits are of high grade tool steel, tempered to file. They hold an edge exceptionally well in working wood of every class and their circular outlines maintain uniform shapes and patterns of the finished product. No filing or fitting of the parts is necessary other than that required to sharpen the bits, which requires about the same skill as that of filing a saw.

To match flooring at the rate of 150 to 250 lineal feet per minute requires side heads of perfect balance, and of undoubted strength, to withstand the enormous centrifugal strains and the hard knocks incident to matching all kinds of lumber at fast feeds.

The "Shimer Limited" Cutter Heads are made from solid steel forgings of 60,000 lbs. tensile strength, which are shaped under a powerful steam hammer until the grain is further solidified and refined, making a tool of great strength. They are carefully balanced and the bits are jointed to insure all of them doing their share of the cutting.

These tools must be seen at work to be appreciated. Like all Shimer products they are sent on trial, returnable if not satisfactory. Address Samuel J. Shimer & Sons, Galt, Ont., Can.

Advertising by the Retailer

If during the various conventions of the retailers there can be aroused more enthusiasm in advertising and some new and novel ideas generated to help the cause along, it will be a good thing, both for the retailers and for the lumber industry as a whole. Perhaps the one thing the retail lumber trade needs to do more of right now is advertising. Some here and there in the trade have kept fairly alive to this subject and a few have been keenly active in local advertising. Taking the retail trade in its entirety, however, there has not been anything like near enough advertising done.

The manufacturers in various lines advertise both to and for the retailer. They advertise to get the attention and business of the retailer, and then various associations of manufacturers do some general advertising to assist in creating a market for their stuff. Also they furnish advertising literature pertaining to their particular product which the retailer can often use to boost business a little. What the retailer needs to do, however, is to consider his business as a business itself and to figure that it is up to him to do some live, wide-awake local advertising to keep in the game properly. His business is not limited to any one or two products that might be advertised in a way by the manufacturers, but it often consists of a wide variation of products, each of which at times holds particular interest for the buyer in the community, and it is up to the retailer to advertise all of these in the course of the year and advertise his own business continually.

Has Centered Mainly on Houses and Home Building

Much of the advertising work done by the retailer in the past has been centered on houses and home building. A strong feature has been made of house plans and plan books, and these have, without question, contributed considerably to business building. They are still good things, too, as is also the later feature of silos for the farmers. They are not the only things, however, and a share of attention should be given to other matters. It often happens that barn building constitutes a good part of the retail lumber trade during the season. Then there is the broad subject of general farm improvement, which includes poultry houses, stock pens, fences and even pig troughs. There are many things along this line that might be featured in advertising, and by being thus featured would inspire prospective customers with a desire for them. It is seeing things pictured and reading about them and seeing the actual things themselves that begets most of the desire to buy in the world, and an aggressive campaign of advertising with various features of farm improvement should result in the selling of lots of lumber that people might not otherwise think of buying. This is a species of creative salesmanship that helps business all around and there is nothing like live advertising to start the thing going, advertising that contains specific suggestions for farm improvement.

Featuring Drain Tile

Then there is not only lumber, but there are the various side lines carried by the dealer. In the springtime drain tile is a great item in some sections and a proper featuring of this in an advertising way with articles in the local papers about the benefits of tile drainage should help business along considerably. There is the matter of true farm sanitation—quite a live subject to-day which, if handled correctly, should help make a market for cement, sewer pipe and various other side lines to the lumber business. In fact, there are opportunities on all sides to bring out something new and effective in advertising and it should prove worth while for the conventions of retailers to have some experience talks on this subject, to discuss what has been done by various members during the past year and bring out ideas as to what may be done during the coming year.

Playing Up the Sash and Door Purchase

For example, when the retailer places his order for a carload of sash and door stock this is a news item for the local paper that can be enlarged upon by setting forth in detail the kinds and sizes of windows bought, the particular kinds of doors purchased and the reason for the purchasing of them. If this is put in proper shape it is not only interesting news, but it is effective advertising that begins the work of creating a sentiment in favor of the very stock that has been ordered, and this makes it easier to sell that instead of having to order something special all the time for some of the builders. The same idea may well be followed when the retailer places an order for anything special in the way of lumber. Whether it is flooring, siding or barn stock, there can generally be developed some interesting feature in connection with the purchase that may be a good news item and will help keep the retailer and his business before the public in an attractive manner. Then, when something of particular note in the way of farm improvement is done anywhere in the community it makes an interesting item that helps inspire others with the desire to improve. Everywhere there is something of this kind all the time that can be used to keep the advertising game alive and interesting. That is what will perhaps do more good for the retail trade throughout the country than any other one thing—more effective and wide-awake advertising.—St. Louis Lumberman.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-11

Shavings and Sawdust

Wanted to buy. Would prefer shavings baled and separate from the sawdust. Quote prices at your station.

M. BRENNEN & SONS, Hamilton, Ont. 7-12

Wanted

500,000 feet 1-in., 1½-in. Soft Elm.
700,000 feet 1-in. Basswood, Ash and Birch.
For delivery as soon as dry this year. State what you can supply and lowest prices on cars.
Box 945, Canada Lumberman, Toronto. 3-8

Wanted to Buy

600 Pieces 16-in. average square Birch timber. State best price and when delivery can be made.

Imperial Hardwood Flooring Company, Montreal, P.Q. 7

Wanted

Several cuts of good Maple and Beech to be sawed during Winter and Spring of 1914 in District between Georgian Bay and Toronto, also stocks of Birch from Muskoka District. Box 964, Canada Lumberman, Toronto. 4-7

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Wanted to Buy

4/4 White Basswood.
4/4 12-in. and over wide Soft Elm.
Round Rock Elm Logs 12-in. and up diameter, 20 to 35 ft. long—admit 10 per cent. good white gray elm. Any station in Canada.
Also square Rock Elm timber.
Highest prices. Spot cash.

HALL BROS., Manufacturers and Wholesalers. Toronto and Marmora. 4-7

Hardwood Pickets Wanted

Beech, Birch and Hard Maple.

1 x 1 x 42.
1 x 1 x 48.
1 x 1½ x 42.
1 x 1½ x 48.
1 x 1½ x 42.
1 x 1½ x 48.

Require Thickness, 1/16-in. Plump. Quality—Free from all defects. Can take delivery of green or dry stock. Apply to The Canada Wood Specialty Co., Ltd., Orillia, for full particulars, price, etc. 24-1-TF 7

Wanted to Buy

One million feet 1-in. Dead Cull Pine, also fifty thousand feet 1-in. Cull Spruce or Hemlock. Apply

M. BRENNEN & SONS, Hamilton, Ont. 6-9

Wanted To Buy—1000 Birch Logs

fresh, clean, straight and sound, 14-in. and up diameter at small end, 8 ft. to 16 ft. long. Delivery to commence as soon as possible. Terms: 75 per cent. cash when alongside track at railway station, balance when loaded on cars. Write P. O. Box No. 1595, Montreal, stating best price. t.f.

Wanted to Buy

250,000 ft. 4/4 No. 1 C. & B. Basswood, winter sawed.

Ten cars 4/4 x 12-in. and up Soft Elm.
One car 4/4, 6/4 and 8/4 1s and 2s Soft Elm.

Box 998, Canada Lumberman, Toronto. 7-10

WANTED—500,000 to 600,000 ft. Hardwood Plank, Beech, Birch, Maple, Ash, Oak, one or all kinds. Dry or green, state which 2 x 6 and up wide, at least 85 per cent. 8-in. and up; 10 to 16 ft. long, at least 90 per cent. 12 ft. and up, and at least 90 per cent. 16 ft. State what quantity you can furnish and when. Delivery f.o.b. canal boat at mill, or delivered New York City by rail or boat, May to October inclusive. Quality: Sound, well manufactured, free from wane, and ends butted. Free from splits, harmful shakes, rot, or rotten knots. Sound knots no objection. Apply with full particulars to Hardwood, care Canada Lumberman, Toronto. 7

Lath and Lumber Wanted

1000 M. Pieces No. 1 White Pine Lath.
1500 M. Pieces No. 2 White Pine Lath.
2500 M. Pieces No. 3 White Pine Lath.
500 M. 1-in. Log Run Brown Ash. Mill Culls out.
500 M. 1-in. Log Run Basswood. Mill Culls out.
300 M. 1-in. Log Run Soft Elm. Mill Culls out.
Now sawn or to be sawn.
Quote lowest prices cars mill.

C. A. SPENCER, Eastern Townships Bank Building, Montreal, Que. 7-8

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft. P. O. Box 392, Ottawa, Ont. 3-t.f.

For Sale

Three cars 4 ft. Spruce Lath.
For immediate shipment.
The Elgie & Jarvis Company, Limited, Toronto, Ont. 7

For Sale

Cut of Hemlock near Ottawa. Will manufacture to suit buyer.

HALL BROS., Manufacturers and Wholesale Lumber Merchants

Marmora and Toronto. 4-7

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW, Montreal, Que. c

For Quick Shipment

6/4, 8/4, 10/4 No. 1 C. & B. Dry Birch. 1-in. and 2-in. Merchantable Spruce. 2-in. and 3-in. Tamarac.

2 x 10 x 16 Merchantable Hemlock.

Quincy Adams Lumber Company, Ltd., C. P. R. Building, Toronto, Ont. 7

Hard Maple and Hemlock

We have half a million feet hard maple and half a million hemlock. Can cut dimension stock. Write best offer.

Trenton Cooperaage Mills Limited, Trenton, Ont. 7-10

For Sale

50 M. ft. 2-in. Dry Birch No. 1 C & B.
50 M. ft. 1½-in. Dry Basswood No. 1 C & B. Cheap to clear.

ROBERT BURY & CO., 79 Spadina Avenue, Toronto, Ont. 7

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,

Timber Department, Janesville, Wisconsin. 1-t.f.

Wanted-Machinery

Wanted

Two or three dump wagons in good repair, suitable for handling mill slabs. State condition and lowest cash price.

BOOTH & SHANNON, Biscotasing, Ont. 6-7

ANTED—Good second hand Double Block Shingle Machine, with collars and saws attached. Also Knee-Bolter; ten or twelve lumber buggies with three haul-off trucks; three dump carts for hauling slabs; one 12-in. double surfacer. Quote prices f.o.b. cars Sault Ste. Marie, Ont. Describe fully in first letter. Address Andrews Lumber Company, Ltd., Escanaba, Mich. 7

For Sale-Machinery

A Bargain

44-inch Wick Gang for sale at a bargain. In first class shape. Apply,

Fraser Lumber Company, Ltd., 2-7

Plaster Rock, N.B.

Mill Machinery For Sale

Complete saw mill plant for sale including two single cutting band mills, gang, and all equipment in first class working order. For particulars apply to the Dickson Company, Peterboro, Ont. 5-8

Second Hand Machinery

150 to 175 h.p. Corliss Engine, 16-in. x 36-in., new two years ago.
75 to 100 h.p. Brown Automatic, 13-in. x 30-in., in excellent condition.
500 to 750 h.p. Buckeye; a good sawmill engine.
Boilers, 72-in. x 18-ft. and 54-in. x 14-ft.

THOMAS HOBBS,

Mail Building, Toronto, Ont. 7-t.f.

Woodworking Machinery For Sale. One Watrous 3-block sawmill, cable feed; 1 36-in. 3-saw edger; 2 No. 2 combined lath machines and bolters; 1 Williams heavy wood frame swing saw; 3 28-in. revolving bed double surface planers; 1 12-in. MacGregor-Gourlay four side moulder; 1 42-in. Fay power feed band rip saw table; 1 54-in. Jackson-Cochrane band resaw. H. W. Petrie, Limited, Toronto, Montreal and Vancouver. 7

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

EXPERIENCED LUMBER INSPECTOR wants position. Address Box 986, Canada Lumberman, Toronto. 6-9

Double cut band or circular sawyer open for engagement. Best references. Address Box 989, Canada Lumberman, Toronto. 7

Position wanted as band saw filer, double or single cut. First-class references. Address Box 972, Canada Lumberman, Toronto. 5-7

Experienced lumber office man wants position. Some capital to invest if required. Good references. Box 990, Canada Lumberman, Toronto. 7

Position wanted as order clerk to take charge of shipping in retail lumber business. Quick and accurate at figures. Address Box 988, Canada Lumberman, Toronto. 7

COST CLERK desires position with a woodworking concern. Ability to organize. Practical and experienced. Best of references. Box 990, Canada Lumberman, Toronto. 7-8

Position wanted as band saw filer, or can take full charge of resaw band. Four years' experience. Strictly temperate. State wages offered. Box 985, Canada Lumberman, Toronto. 6-8

Saw filer, band or circular, wants position. 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 5-8

Wanted—Position By Experienced Manager

To take charge of lumbering operations. Can get results and furnish the highest credentials. Canadian. Box 973, Canada Lumberman, Toronto, Ont. 8

EXPERIENCED MAN wants position in charge of outside operations for lumber manufacturing firm. Fifteen years' experience in all branches of lumber business with up-to-date firms. Best of references. Box 979, Canada Lumberman, Toronto. 6-7

BAND SAW FILER wants position. Twenty years' experience in United States and Canada. Can furnish gilt edge references. Would go where quality and quantity is wanted. Would expect highest wages. Single or double cut. Box 960, Canada Lumberman, Toronto. 4-7

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

WANTED—Competent millwrights to install sawmill machinery. Booth & Shannon, Biscotasing, Ont. 6-7

WANTED—The Fraser Brook Lumber Company, authorized capital \$100,000, paid up \$53,000, want agent to sell their balance of stock (shares). Apply to J. E. Pineau, Secretary, Fraserville, Que. 7-8

WANTED—Men for sawmill, single circular 10-in. steam feed, steam nigger, sawing hardwoods and pine. Sawyer, setters, carriage-man, trimmer-man and edger-man. Mill 60 miles north of the Canadian Soo on Lake Superior. State experience and wages wanted in first letter. Address Andrews Lumber Co., Ltd., Escanaba, Mich. 7

WANTED—Two band saw setters, and two edgemen. Mill starts April.

Prince Albert Lumber Company, Ltd.,
Prince Albert, Sask.

7-8

Veneer Agency

Large American manufacturer of veneers and thin lumber wants a representative to travel Ontario and Quebec on a commission basis. Exclusive territory. Apply Box 978, Canada Lumberman, Toronto. 6-7

Business Chances

For Sale

Sawmill in good timbered district, about 50 h.p., all complete. It cost \$6,000. To close estate will sell for \$1,500. Address Box 977, Canada Lumberman, Toronto. 6-7

Wanted—Part interest in Planing Mill and lumber yard, or in small wholesale lumber business. Box 1000, Canada Lumberman, Toronto. 7

For Sale—Retail Lumber Yard and

Planing mill, \$5,000. Stock at invoice prices. Last year's business \$25,800. Natural gas power. Railway siding. 400 ft. metal sheds, etc. Caledonia Milling Co., Ltd., Caledonia, Ontario. 6-9

Active Partner

Wanted to join practical man now operating sawmill at Barriere, B.C., on the C. N. R. Within easy reach of Prairie markets and a plentiful supply of good lumber. Write Box 997, Canada Lumberman, Toronto. 7-9

Saw Mill For Sale

Fully equipped sawmill, including Boiler, Engine, Trimmers, Belts, etc. Everything in running order. Capacity 18,000 to 20,000 ft. per day. Located on T. & N. O. Railway. Apply Box 984, Canada Lumberman, Toronto. 6-7

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. 11

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

Big Money in Silos

Big money can be made in properly constructed wooden silos and tanks. We are large U. S. manufacturers and have unquestionably the best methods for silo and tank construction. We want to sell our Canadian Patents outright to some live manufacturing firm in Canada. For particulars address Box 1, Canada Lumberman, Toronto. 7-8

ESTEVAN, SASKATCHEWAN

Splendid opening for Planing Mill. Lumber Yard could be run in conjunction with advantage. 5,000 population; with large district to serve; cheap power, fuel, light, etc.; city growing rapidly, first-class business assured. Write immediately to the Secretary, Board of Trade, Estevan, Sask., Canada. 4-8

British Columbia

Saw Mill and Timber Limit For Sale

A 25-thousand feet capacity Saw Mill, and 90 million feet first class Spruce, Red Cedar, Hemlock and Yellow Cedar, etc., under B. C. Special License. At good shipping point near Prince Rupert, B.C. Inspection invited. A. Cuthbert, P. O. Box 466, Prince Rupert, B.C. 6-11

Business Opportunity

For Sale—Woodworking shop fitted especially for general work. New and up-to-date machinery. First class dry kiln. Blower system. Railway siding. Situated in a live and thriving Ontario town. Splendid local and shipping trade. This is an exceptional opportunity to acquire a good business with a trade already established.

Write J. A. C., Canada Lumberman Toronto. 7

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Miscellaneous

Coal and Timber

Will purchase in large tracts only, either in Canada or the United States. We are principals and only deal with owners. No agents or options. Address "Cash," c/o Canada Lumberman, Toronto. 4-7

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

Vertical Spindles

It is rather remarkable that a great many mills, where everything to enable the greatest amount of work possible to be obtained from the machines is to be found, do not possess a vertical spindle. They will have band-saws, planers, deal frames—the list need not be detailed. It is sufficient to say that the mill is without a vertical spindle. Of course, we do not refer to mills that make joinery, but to the many trade mills that saw and plane for the trade. "Quantity" is the motto in a trade mill, and the small order is looked at with a frown. Yet, in spite of this, there are many occasions when it is absolutely necessary to take orders that do not pay for the machining for the sake of the orders that do. A big planer will be idle for a day while it is being set up to make a large moulding. Perhaps all that is required is two or three of one section. Only those who know can realize how difficult it is to fit up a large planer for some special mouldings, and yet it is a very simple matter to do these same mouldings in one-tenth of the time on a vertical spindle. When this is realized we are sure that those who at present have charge of large mills, which do not possess a vertical planer, will remedy this defect, and will order one. The reason why the vertical

spindle is such a useful machine in a trade mill is that any order that is at all intricate or out of the usual run of work can be executed upon it in such a small space of time. Take some mouldings, for instance, that have to be done on a big planer in a mill where there is no vertical spindle. There are the following adjustments to make: The alteration and setting up of four cutter blocks, the making of shoes to fit the moulding, and the careful adjustment of all the cutter blocks, to get the exact shape and outline. All these adjustments take a great deal of time and considerable care.—Timber News.

Some Second-Growth Prejudices

There is considerable prejudice in New England against whitewood. This is the tree known also as tulip and yellow poplar, but owing to the large amount of sapwood in the second-growth the name whitewood is usually applied. It is claimed by some manufacturers that whitewood is harder to work and causes more trouble from warping and checking than is the case with yellow poplar. As a result the high-grade material is brought in, while the local product is hard to dispose of at a profit. Other manufacturers claim that the prejudice against the wood is not justified and that with proper handling it will fill many of the places of the more expensive poplar. A maker of porch columns uses whitewood and states that it gives excellent satisfaction. Since the future demands for timber must ultimately be met for the most part by second-growth material, a better knowledge of second-growth hardwoods seems desirable. Chestnut is one of the most common trees in southern New England, yet many furniture manufacturers will not use it, preferring stock from farther south and west. While there are apparently grounds for its discrimination, it is quite probable that many of the objections could be overcome by improved methods of cutting, handling and selling.

Can This Waste Be Eliminated?

A resident of Spencerville, Ont., recently sent to the editor of Conservation a sample of curled maple, suitable for fine cabinet work, of which five cords had been delivered to him in the form of firewood. Much of it was split in slabs reaching twenty inches in width, and all of it was of good quality. On previous occasions, the same gentleman has been sold cordwood consisting of large-sized bird's eye maple, wavy birch of fine grain, black cherry and butternut.

A somewhat similar waste of fine woods for inferior purposes was brought to our notice by a manufacturer of vehicles in St. Thomas, Ont., who showed us samples of waste pieces from his factory, of oak, ash, hickory and hard maple. Many of these pieces would be very suitable for tool handles, etc., but, through lack of a market, are obliged to be sold as firewood.

BAUGHMAN'S BUYER AND SELLER

Special Price, \$1.00

Canada Lumberman - Toronto



Montreal Engineering Co.,
Limited,
164 St. James Street,
Montreal.

Timber limits examined,
cruised and surveyed.
Waterpowers developed.
Pulp and Paper Mills designed and constructed.
Projects financed.



PEAVIES

Cant Hooks, Boom Chains, Timber Dogs

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

Review of Current Trade Conditions

Ontario

The soft wood trade in Ontario seems to have entered one of the quietest seasons which it has experienced for several years. Prominent wholesalers report that they have not seen so little business in progress at this time of year during the last ten years, one dealer declaring that business is at least 50 per cent. off in volume. The causes seem to be numerous. In fact, the general opinion is that the reason for the quietness is to be found in the co-operation of a number of factors, which, in themselves, would not have been sufficient individually to reduce trade to any noticeable extent. Tight money, severe weather, lack of building activity and uncertainty in regard to such important matters as the situation in connection with the Canadian Northern Railway finances, are among the chief causes. Trade in Western Canada, moreover, does not seem to have picked up to any extent, and, as much of the prosperity of Ontario depends upon the west, the effect is quite noticeable in a smaller demand for such raw material for manufacturing, as lumber.

No one seems to think that the present situation is a matter for serious anxiety. The most frequent opinion heard is that trade may pick up at any moment, as soon as the causes contributing toward greater activity are more pronounced. The representative of a well known southern pine manufacturing company, who recently made one of his regular trips in Ontario states that the large manufacturers, particularly the agricultural implement makers both in Canada and the United States are buying extensively, which may be taken as an encouraging indication of improvement. The International Harvester Company, for instance, according to his report, recently placed an order for 250,000,000 feet of long-leaf yellow pine alone.

The hardwood trade, while not so quiet as other lines, is by no means active. Shortness of money and severe weather seem to have been affecting it to some extent. There is a pretty fair movement of 1 in. 1sts and 2nds birch, and good lines of basswood are moving fairly well. Large consumers of hardwoods are reported to have light stocks. Stocks in the hands of wholesalers and manufacturers are also light. The quantity of hardwood taken out of the woods during the past winter was probably about the same as during previous winters. A number of wholesalers have been devoting their time of late, more to cleaning up their back orders than to looking for new trade. The volume of trade in the case of some hardwood wholesalers has not suffered very much. A few, in fact, report that their sales during the first three months of 1914 have been practically the same as they were during the corresponding period of 1913.

Improvement is reported in business conditions at Ottawa. Several dealers have made fairly good sales within the past week, although prices show no important alterations.

Eastern Canada

Better weather during the month of March helped the lumber trade at St. John, N.B., to some extent. There has not been any real activity, however, in the movement of stocks. Factories have found it difficult to keep their men employed, and have only done so by turning out stock for the summer trade. All the mills at St. John are prepared for their summer sawing and will be in operation by the middle of the present month. Some of the larger mills commenced sawing late in March. No change has occurred in prices during the past fortnight. All the mills have sold their cuts of English deals for 1914, but American stocks have not been sold in advance. City cut deals are quoted at \$17 per thousand for the usual specification. Ends are bringing \$12 and 4ths \$15. Refuse lumber will sell at the mills at about \$11 per thousand. No business is being done for the American market, but an improvement is hoped for when warmer weather has set in definitely. Some city cut laths are selling at \$2.85 on the wharves. Spot laths held over from last fall are quoted at \$3.50 per thousand on the wharves. There are between seven and eight million laths in stock at St. John. Stocks of English deals have practically all been shipped. Stocks of dry pine are scarce and are likely to advance in price this season.

Logging operations in the woods are finished. The outlook for driving is only fair as there is not much ice in the woods and the snow will pass away quickly. Much will depend therefore upon the rains. It is estimated that the cut on the upper St. John will amount only to about 60,000,000 feet. The price of logs is expected to be about \$1 per thousand higher than it was last year.

The New England market shows a firmer tone in spruce, parti-

cularly dimension stock. Several spruce manufacturers who have been selling to the retail trade direct at Boston report their intention of asking \$24.50 as a base price instead of \$24. Some dealers still complain of quiet business, but many others report an improved demand for frames. One sale is reported of 90,000 feet on a \$25 basis. Retailers are apparently realizing that further delay in making their purchases may be expensive. At New York, the prices of spruce continue firm and several large orders have recently been placed at slight price advances. Yards are fairly well stocked with spruce assortments and weather conditions have not encouraged the movement of stock. Although the prospects for any extensive increase in the building demand are slight, retailers are making more enquiries than formerly, indicating a tendency to take advantage of present prices, in anticipation of an early advance.

A firmer market is reported for lath at Boston. Most of the transactions for 1½ in. are at \$4.15 to \$4.20 and even \$4.25 is reported in a few cases where quick delivery was required. Some dealers are asking \$4 for 1½ in., but most of the business is at \$3.75 to \$3.80. Shingles are rather unsettled. A large Canadian manufacturer recently dropped his price for white cedar extras to \$3.55 and for clears to \$3.10. An increasing interest is being taken in British Columbia red cedars, since the removal of the duty, and salesmen report that they can obtain \$3.65 for reds more easily than \$3.55 for white cedar extras. For extras, five butts to 2 in. full count, \$3.75 has been obtained. Clears are ranging from \$3 to \$3.25 and second clears from \$2.75 to \$2.90.

Great Britain

Very little improvement, if any, is reported in the London spot market during the past fortnight. Forward buying is very slack. Deliveries from the London docks, however, continue in fair quantity. For the week ending March 7th, the total was 4,782 standards as compared with 3,045 standards during the corresponding week of 1913. Liner shipments show little or no change. At Churchill & Sim's recent auction sale, 3 x 6 to 9 in. 3rd Quebec spruce, 10 to 13 ft. sold at £10, while 3 x 7, 3rd, 6 to 8 ft. brought £9 5s. Some 3 x 9, 3rd, 6 to 9 ft., brought £9 5s. Prime British Columbia fir sold at £13 5s. per standard hundred for 4/6 x 12/16, 12 to 32 ft. 3rd Quebec pine, 3 x 11 in., 12 to 16 ft. brought £15 5s. Quebec birch planks 2 x 6 to 16 in., 6 to 17 ft. brought 1s. 6½d. per cubic foot.

A little more activity is reported at Liverpool in spruce deals on c.i.f. terms for forward delivery. Offerings of the better classes of deals are not as yet plentiful. Several cargoes are reported to have been placed at prices which should be satisfactory to the shipper. Liner parcels have been coming in steadily and have eased off a little in value, as the market is already overloaded. The spruce spot market is not very buoyant and importers have to take what they can get. The indications are that the import season will be started with as large stocks as have been held for years at a similar period. The present consumptive demand is much below par. Only a few transactions are reported in birch on c.i.f. terms. Values continue remarkably firm. The spot market is unchanged, and the consumptive demand exceeds the import, so that stocks are being reduced slowly, but surely. At Manchester, parcels of the better cut of spruce deals are offered at £9 15s. basis for 7 and 8 in. x 3 in. for the season's shipment.

United States

An uncertainty still prevails in regard to the general business situation in the United States, but there are some who feel convinced that business is in a sound condition and will show satisfactory improvement within the next month or two. During that time they expect to see the commerce of the country readjusted to meet the new conditions brought about by new laws which have recently been put into force by the government. There are still, however, many obstacles to be overcome, the chief among these being the fact that the railroads persist in remaining out of the market. Until the railroads and other large corporations feel free to purchase more extensively, a general return of trade activity is not expected. In regard to the lumber business, there is a fair amount of buying in progress in most parts of the country, but there is no rush. Every order received bears distinct marks of having been very cautiously considered and yard owners are sorting their depleted stocks, rather than buying extensively. They are, in fact, still playing a waiting game. Building activity is commencing to increase, wherever the weather has relaxed and this would seem to indicate that the movement of lumber will soon become more general. The wood consuming industries are fairly busy, but are very

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

BEAR IN MIND

That we saw all winter and always have large stocks of

Norway and White
== Pine Lumber ==

Large timbers cut to order, any length up to 60 feet, from Pine and B.C. Fir.

Headquarters for Norway Silo Stock.

conservative in their purchases. Taking everything into consideration, the lumber business is upon a basis of purchasing for current requirements only, and shows no speculative feature whatever.

Northern pine, with the arrival of mild weather is showing seasonable signs of activity. Prices remain steady with no indication of advance until the movement becomes much heavier. The lower grades are moving more rapidly than the uppers, but box factories are not buying as extensively as they were a year ago.

Hemlock shows a slight improvement. Northern stocks are small and prices are sufficiently high to permit of some profit, yet not high

enough to prevent active competition with southern pine. Pennsylvania manufacturers are reported to be accumulating stocks at the mills, rather than pushing sales. The eastern demand is still slow.

The hardwood trade appears to be improving gradually, although the demand is still of a hand-to-mouth character. Plain oak is moving fairly well. Ash and hickory are strong and offerings are not heavy. The lower grades of poplar are active. In the north, the trade in hardwoods continues on about the same basis as during the winter, and prices are firm. Maple is strong, especially in inch lumber. There is a steady movement of birch. Elm is moving well at good prices.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

St. John Trade Stirring—Details of Log Output

St. John, N.B., March 23; (Special to the Canada Lumberman):—A slight improvement has taken place in the local lumber trade during the last ten days, but previous to this it has been the duller winter in three years. The factories have been hard pushed to keep their men employed, and have only done so by making up stock ahead for summer trade, of which they now have large quantities. The weather has improved much during March and this has caused a certain amount of repair work to be taken up, but the outlook for building for the coming season is not nearly as good as last year. Many large building enterprises were carried out last season and are now about finished; namely, the C. P. R. elevator, the Atlantic Sugar Refineries, the Armory, the McClary Company warehouse and offices, the Bank of British North America, the Merchants Bank of Canada, and many dwelling houses. No great buildings such as the above will be undertaken this year. Of course, a certain amount of changing over of buildings is always going on. The C. P. R. will change over the Vassil building on King street to offices for themselves, and then they will have their entire offices under one building, not scattered as they are at present. It is said that the Fenton Land Company will build about twenty dwelling houses this year. The New Brunswick Realty Company will build two or more dwellings besides some other projected houses for which plans are now being made.

All the mills are being prepared for summer sawing and will all be in operation by April 15th. Messrs. Stetson Cutler & Company will start their Pleasant Point mill on March 28th, as will Messrs. Randolph & Baker; Stetson Cutler & Company sawing for the American market and Randolph & Baker for the English market. During the past winter, Stetson Cutler & Company have built a new distributing system at their Pleasant Point mill. This is to make the work much easier. It will now take less men than before to handle the deals, etc., in the yard. J. E. Moore has made some extensive improvements in his new mill at South Bay. All the other mills have had more or less improvements put upon them. It is not known whether the Hilyard mill will be in operation this summer, or not, as it is said to have been sold to a company of real estate men, called the Harbour Properties Limited. This mill has been sawing for Messrs. Stetson Cutler & Company during the past two years.

English Deal Cuts Sold

Prices of wood goods remain about the same as at last writing. All the mills here have sold their cut of English deals for the coming season. The American mills have not sold ahead. The price for deals is largely for city cut \$17 per M. for the usual specification, viz., 50 per cent. 7 and up x 3 in., 50 per cent. 9 in. and up, with 3 x 4 and 5 in. at \$15; 3 x 6 in. \$15.50, 7 x 2½ in. at \$16 to \$16.50, ends \$12, fourths \$15, side boards have been sold at around \$16 per M. for the ordinary merchantable quality, clears included. Refuse lumber will be sold from the mills at about \$11 per M. for all kinds.

The American market is extremely dull at present. Practically no business is being done from this port. Reports show that very little work has been carried on during the past winter, but should warmer weather set in, an improvement is likely to take place, although the buyers seem very dilatory about purchasing any stocks ahead. Laths have been sold, for some city cuts, at about \$2.85 on wharves. Other mills prefer to wait until later. Mills having spot laths held from last fall, are asking \$3.50 per M. on their wharves. Seven to eight million would be a fair estimate of stocks of lath here, about all the deals, boards, etc., have been shipped from the English mills. Messrs. Stetson Cutler & Company have quite a stock of American sizes at their different mills, probably in the vicinity of eight millions of two, three and four inch. Stocks of pine are scarce, es-

pecially dry lumber, and will probably see higher prices during the coming season.

Operators Waiting for the Drive

Along the river, about all the logs have been hauled to landings and operators are now waiting for the streams and rivers to break, when the logs can be driven, rafted and delivered to the mills. The outlook for driving at the present time is only fair. While there is quite a quantity of snow in the woods, there is very little ice under it, and when the snow is gone there is nothing left to fall back on. Conditions, therefore, will depend entirely on the rains. It is rather early to predict what the driving will be on the lower section of the river. The cut of logs, such as bark logs, has been fair.

	Feet
On the Neripis, H. W. Woods will have about	700,000
J. E. Moore on the Oromocto and lower part of river	3,500,000
King Lumber Co. for St. John (J. E. Moore)	300,000
Sayre Co. on Salmon River and lower part of St. John	3,000,000
Warner & Co. on the lower river	4,000,000
J. A. Gregory, hemlock, on the Oromocto	1,000,000
Little River Sunbury Co., for the River Valley Lumber Co.	3,000,000
For the Partington Pulp Co. Estate	1,000,000
Partington Pulp Co. on the Nashwash for St. John old and new about	21,000,000
Sundry operations by farmers	43,000,000

All the above logs will come in below Fredericton and will go practically all to St. John.

Above Fredericton the Fraser Lumber Company will probably have the larger quantity of the bark logs for their mill at Fredericton.

Reduced Cut on Upper St. John

A rough estimate of logs for St. John mills from the Upper St. John, would be:

	Feet
Chouinard & Kilburn for Murray & Gregory	9,000,000
Nobles-Currier-Cunliffe Bros. for Stetson Cutler & Co.	17,000,000
Randolph & Baker on Little, Black, Green and Grand rivers.	12,000,000
J. E. Moore and Charles Miller on Salmon River	8,000,000
Stetson Cutler & Company on Tobique	6,000,000
Chas. Miller on Tobique	4,000,000
Other operators	4,000,000

Total, about 60,000,000

This is a very small cut and is caused largely by the quantity of logs held over in St. John after the strike of last year.

The prices for logs will be about a dollar per thousand higher than last season.

Labor is quite plentiful at present, and no clouds are in the sky regarding strikes, etc. Wages will remain the same as in 1913.

Montreal Outlook Fairly Good

Montreal, March 24th (Special to the Canada Lumberman): Although here and there dealers report a quiet trade, business generally is stated to be fairly good. Some wholesalers have booked many substantial orders, prices being firm with an upward tendency. The outlook is distinctly satisfactory, for while the large structures to be erected are limited, there is certain to be a heavy programme so far as residences are concerned.

There are complaints of drastic cutting in local quotations, a condition which is not expected to continue, and is probably due to exceptional circumstances.

Dry stock is scarce, and will become more difficult to secure as the season advances.

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OUR Lumber is manufactured with a Purpose. From the Stump to the Finished Product this Purpose is never forgotten. We aim to make our Products and Satisfaction synonymous. We want every car we ship to be filled not only with Lumber but with Satisfaction.

We are equipped to give you uniform grades—dry stock—fine planing mill work—good service and courteous treatment.

When buying of us, your worry, your anxiety, is over with the placing of the order. You know you will get what you want—in the way you want it—that upon arrival, you will be pleased. It will make your business a source of pleasure and happiness.

Try Fenderson Service During 1914

Begin Now. Address:

John Fenderson & Co.

Incorporated

Sales Office

27 Besse Place
Springfield, Mass.

MILLS AT

Sayabec, Que. Cedar Hall, Que.
Salmon Lake, Que. St. Moise, Que.
Jacquet River, N. B.

**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

Sash and door factories are, for the most part, well supplied with orders.

The position of the ground wood market has not altered. It is likely to continue until the spring is well on, when there will be plenty of water power available. It is expected that the demand will increase, although no gain in price is likely.

Chemical pulp mills are shipping out their products at a good rate. Recently there has been a more active trade and prices are hardening.

News print mills are very busy, and shipping their entire output.

Barbados Market Report

S. P. Musson Son & Company, Barbados, B.W.I., report under date of February 27th as follows:—Lumberstuffs.—White pine.—The only arrival during the fortnight is the Schr. "Moran" from Lunenburg, to selves, with 110 M. ft. which we had sold to arrive at \$32 for merchantable, \$24 for second quality, and \$18 for inferior. Market is fully supplied, and we do not look for any improvement on last prices at present. Spruce.—The only receipt is a small lot of 15 M. ft. ex "Moran" chiefly second quality and refuse, which we sold at \$22, for second quality and \$18 for inferior. Dealers have sufficient stock on hand for present requirements. Pitch pine.—No receipts, but a cargo is expected. Shingles.—No receipts of either Long Gaspe or cedar laying, and there is a slight enquiry for both descriptions. We could recommend a shipment of best quality Long Gaspe, but there is no demand for inferior grades. Shooks.—No arrivals. Wood hoops.—Receipts consist of 734 bbls. by the S.S. "Savan" imported on dealers' account.

Ottawa Trade More Active

Ottawa, March 23rd (Special to the Canada Lumberman): With the long winter over, business is showing signs of improvement. Several of the dealers in Ottawa and district report some fairly good sales within the last few weeks. There have been comparatively no alterations in prices lately. Pine s.c. strips 1 in. have advanced from \$20 and \$22 to \$21 and \$23.

Mr. Hugh M. Williams, of the Williams Lumber Company, returned home last week after a two months' visit to Great Britain. Trade there, he says, is far from brisk, the lumber business particularly being anything but encouraging just now. However, with the settling of some of the big problems now before the country, merchants in general feel confident that things will improve rapidly. "One phase of the lumber trade, which I think is proving detrimental" said Mr. Williams, "is that some firms are shipping on consignment and selling at any prices offered in preference to holding back for awhile. It is in this way that trade and prices are being demoralized. I know of cases where Canadian lumber was sold in Great Britain cheaper than it could be bought at the mill's here. I found that English dealers are very prone to substitute almost anything for Canadian white pine. Manufacturers here should do all in their power to discourage this."

Ottawa Valley Protective Association Formed

With the object of forming a Forest Protective Association some of the leading lumbermen of the Dominion met in the Chateau Laurier last Friday to discuss plans for organization. Hitherto the business of protecting the forests has been carried on for the most part by the individual owners of forests, but, profiting by the example set by collective timber limit owners in British Columbia and Quebec, the lumbermen in the Ottawa Valley and other districts deemed it wise to co-operate. Senator W. C. Edwards occupied the chair at Friday's meeting and the committee named to organize the association is composed of Senator Edwards, Ottawa; George H. Millen, E. B. Eddy Company, Hull; J. B. White, Riordan Pulp and Paper Company, Hawkesbury; R. M. Kenny, James MacLaren Lumber Company, Buckingham, P.Q.; and W. C. Hughson, Gilmour and Hughson, Hull, P.Q.

The meeting was largely attended by some of the best known men in the lumber trade and forest protection work. Among the firms and their representatives present were Messrs. George H. Millen and J. F. Rochester, E. B. Eddy Company; Senator Edwards, Gordon C. Edwards and J. A. Cameron, of W. C. Edwards and Company; P. C. Walker, Shepherd and Morse Lumber Company; Sir Henry K. Egan, Hawkesbury Lumber Company; J. C. Brown, Fraser and Company, Ottawa; J. H. Black, of J. R. Booth and Company; Grant P. Davidson and James Davey, Estate of Jas. Davidson; W. C. Hughson and A. E. Maxwell, Gilmour and Hughson; R. M. Kenny, E. J. Graham and J. E. Rothery, of James MacLaren and Company, Buckingham; J. B. White; Charles Read and John Gwynne, Riordan Pulp and Paper Company; Clyde Levitt, Dominion forester, commission and conservation, and Arthur H. Graham, government forest agent, Arundel, Que.

It is proposed that the new association appoint a manager under whom will be four inspectors, who, in turn will have under them a number of forest rangers. Each inspector will have a separate dis-

trict under his control. Lookouts and telephones will be placed on the mountains and these, with the aid of modern telephone equipment, will help to prevent the spread of fires. All the railroad lines through the forests will also be patrolled. The work of the association will be practically the same as that now being carried on by the St. Maurice Forest Protective Association.

Mr. St. L. Decarteret, president of the St. Maurice Association, and Mr. J. B. White, of the Riordan Pulp and Paper Company, gave an outline of the work accomplished in Quebec and spoke of the advantages which had been derived from the St. Maurice association. Mr. J. Price, consulting forester of British Columbia, spoke strongly in favor of forming an association and demonstrated from experience the benefits to be gained.

St. John Shipments to Transatlantic Ports

The export of lumber from St. John, N.B., to transatlantic ports in January and February was only about half as great as for the corresponding two months in 1913. The figures follow:

	1913.	1914.
Spruce, sup. ft.	16,212,005	8,065,382
Hardwood, sup. ft.	453,481	1,327,804

With the exception of 501,387 superficial feet of spruce to South Africa and 110,000 feet to Australia, the shipments went to Liverpool, Manchester, Irish ports, London and Glasgow.

Shipments for January and February this year were as follows:

	Spruce S. Ft.	Hardwoods S. Ft.
W. Malcolm MacKay	4,107,928	201,299
John E. Moore & Company	1,590,127	180,583
George McKean	1,264,296	627,629
Other Shippers	1,103,031	318,293

Comparing shipments for February alone the quantity of spruce was 3,377,779 feet compared with 7,993,672 for February of last year. Shipments for March are also likely to show a marked reduction compared with the corresponding month last year.

Liverpool Market Report

Alfred Dobell & Company, Liverpool, Eng., in their monthly timber market report, under date of March 6th, write as follows:—The market presented no special feature during the past month. Supplies again came forward moderately and a slightly improved demand prevailed at generally steady values.

Canadian woods—Waney board and square pine.—The demand was of a retail character. Oak.—A fair consumption prevailed at firm prices. Rock elm.—A slightly improved demand existed. Birch.—Logs.—The arrivals, which were light, have been on contract. There was a steady consumption at firm figures. Planks.—Although the stock shows some diminution, it is still on the heavy side. Pine deals and boards.—There was only a moderate demand and supplies are ample. New Brunswick and Nova Scotia spruce deals.—Although the consumption exceeded the import by nearly 3,000 stds., the stock is too heavy for this period of the year.

Wholesale prices of Colonial woods, at Liverpool, are as follows:—

TIMBER	£	s	d	£	s	d
Quebec square white pine, per cu. ft.	0	2	6	0	4	0
Quebec waney board pine	0	3	4	0	5	0
St. John pine, 18 in. average	0	2	6	0	3	9
Quebec red pine	0	2	6	0	3	0
Quebec oak, 1st quality	0	3	4	0	4	3
Quebec oak, 2nd quality	0	2	0	0	3	0
Ash	0	1	6	0	2	3
Elm	0	4	0	0	5	6
Quebec birch	0	1	6	0	2	4
St. John birch	0	1	6	0	2	0
Birch planks	0	1	2	0	1	5
Spruce spars	0	0	10	0	1	0
DEALS—						
1st quality Quebec pine . . per std.	30	0	0	45	0	0
2nd quality Quebec pine	18	0	0	32	0	0
3rd quality Quebec pine	13	10	0	18	10	0
St. John, Miramichi, etc., spruce	9	10	0	10	0	0
Nova Scotia, etc., spruce	9	5	0	9	15	0
SPRUCE BOARDS	9	0	0	9	10	0
LATHWOOD per fathom	4	10	0	6	0	0

An Attractive Calendar

A very attractive calendar for the year 1914 has been sent out by James D. Lacey & Company, Timber Land Factors, 1750 McCormick Building, Chicago, Ill. The calendar is handsomely designed and is decorated with a striking colored picture reproduced from a photograph taken in the Deschutes Valley, Central Oregon, showing west-

Canada's Largest Saw Mill

Douglas Fir Timber

We manufacture and ship on short notice all sizes and lengths of merchantable timber up to 120 feet in length for derricks, scows, dredges, shipbuilding, bridge and structural timber. We dress timber up to 24 x 30.

Dressed and Matched Lumber

Write us for prices on rough or dressed clear fir and

cedar. We make quick shipment of clear fir flooring, siding, ceiling, shiplap and boards, also red cedar bevel siding.

Douglas Fir Cross Arms

Douglas fir base casing and mouldings manufactured to standard patterns at close prices, shipped with doors or cedar shingles.

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British Columbia Red Cedar Shingles

We make our own shingles and place our brand on them, which is our guarantee that they are manufactured fully up to grade with regard to quality of material, sawn to full thickness and tightly packed.

We want your permanent trade. Let us ship you one car.

B. C. Fir Doors Are Perfect Doors

We are now making 1000 perfect fir doors each day and can double this output on short notice. Our door sales are increasing rapidly and the reason is that we are making a perfect door with regard to quality of material and workmanship. Prices and information furnished on request.

Three ply rotary cut fir veneer makes beautiful panelling.

Canada's Largest Door Plant

ern yellow pine which predominates in that territory. The timber is very large and of splendid quality and the picture is sure to be given a prominent place in any lumberman's office who is fortunate enough to receive a copy.

Quiet Trade at Liverpool

Farnworth and Jardine in their wood circular, under date of Liverpool, Eng., March 2nd, say:—The business of the past month has again been of a quiet character, but as arrivals generally were moderate, deliveries more than kept pace, thus making some impression on stocks, but several of the important lines are still too heavy. Values for some of the leading articles are difficult to maintain, otherwise prices are fairly steady. The freight market is dull, but some deal charters from Canadian ports have been concluded at moderate rates.

Canadian Woods.—Pine timber.—There is little change in the position to report. The demand continues quiet, and values rule high, but stocks available are fairly moderate. Wane pine, 1st class.—There has been very little enquiry during the past month. The deliveries have been small, but stocks in first hands are light. There is little change in values to report. 2nd class is only in limited request, and present stocks are sufficient. Red pine.—No change. Oak.—No arrivals; demand is restricted, and the deliveries have been disappointing, but stocks are moderate and values steady. Elm moves slowly, but prices are firm, and stocks moderate. Contracting for fresh supplies has been on a slightly higher basis. Pine deals.—Imports nominal; there has been rather more enquiry, and the deliveries show improvement, but stocks are ample. Values are unchanged. Red pine deals.—Demand inactive.

New Brunswick and Nova Scotia spruce and pine deals.—Imports to the Mersey (including Manchester) amounted to 2,570 stds., against 3,260 stds. for the corresponding month last year, about equally divided between Liverpool and Manchester. The deliveries have been fairly satisfactory, but stocks, though further reduced, are still too heavy. Sales have been confined chiefly to liner shipments, and values difficult to maintain. Contracting for next season's supplies is not active. Pine deals.—The demand is limited; prices firm.

Birch.—Logs.—The import has been nominal; more enquiry for fresh wood, and stocks are low. Values are firmer. Planks again arrived in moderate quantities. The deliveries have been fair, and stocks are in a moderate compass, but there is little change in values to report.

British Columbian and Oregon pine.—The import amounted to 4,000 feet. The demand is quiet, deliveries small, and stocks are heavy.

London Stocks of Colonial Timber

Churchill & Sim, in their wood circular under date of London, Eng., March 4th, report the stock of Colonial timber, deals, etc., at the public docks on March 1st as follows:—

Pine deals and battens in Pieces	535,000	433,000	374,000	496,000
Red pine	20,000	22,000	47,000	66,000
Spruce ditto	803,000	492,000	553,000	541,000
Oak timberin Loads	—	—	32	34
Oak planks, etc. (American)	4,287	1,298	2,451	1,392
Birch timber	271	183	218	146
Birch planks	5,474	4,904	3,989	2,676
Ash timber	55	12	—	—
Elm timber	1,445	232	615	878
Yellow pine timber	946	810	318	228

Importations during the month from New Brunswick were as follows:—

Pine deals . . . 3,000 pieces	against	72,000 pieces in 1913.
Birch planks . . 38,000 pieces	against	33,000 pieces in 1913.
Spruce deals . . 50,000 pieces	against	Nil pieces in 1913.

The demand for pine deals has been small again in February, but there is no alteration in prices. Spruce have been more freely sold at some concessions in market rates, and the stock is still too heavy in the face of a quiet trade.

The stock of B. C. and Oregon pine has been increased by the arrival of a sailing cargo of timber; prices ahead have fallen in sympathy with reduced tonnage quotations, but this has not yet had an effect on the prices for long logs, but shorter specifications have fallen in value.

The Care of Extra Thin Band Saws

By Hapsburg Liebe

With timber growing scarcer and scarcer every day, and the prices of lumber going higher and higher correspondingly, the motif of the future is going to be thinner saws—perhaps I should have said more thin saws. Now, personally I have never liked extra thin saws, but that fact is not going to keep me from telling the truth about the

future. As I started out to say, the excellent filer of to-morrow is going to be the expert on extra thin saws.

Thin blades are relatively harder than thick to make go right. This is a great reason: As much clearance on either side of the plate is required for the one as for the other; the thin saw must cut more wood for its thickness, and therefore its strength, than the thick saw. Figure it out as minutely as you please for yourself; I think you'll find it interesting. But the thin blade has one thing in its favor, although this cannot make up for the foregoing feature not in its favor; owing to its readily conforming to the circumference of the wheel, it is not so apt to crack as its bigger brother.

Now in caring for the delicate fellows, one must be sure that everything is as it should be. The swage anvil must be perfectly square, and it must set on the back of the points correctly, or the points will be bent out to one side. Owing to the width of spread required in comparison with the thickness—or the thinness?—of the plate, the swaging should be barely sufficient or the point may split; and if it doesn't split, the over-working of the steel with the shaper in the work of getting the spread down to the necessary littleness will cause the point to crumble away. If the steel is hard enough to hold a cutting edge, and to hold tension satisfactory, it will crumble when it is over-worked. This latter is a common complaint with some young filers I know; and in this connection I will mention that I have seen more than one good saw returned to its makers unfairly.

A not unusual devilment in the practice of fitting thin blades comes with the automatic sharpener. If it does not face up and back up the teeth squarely, the good effect of the squareness of one's swage will be lost. If the emery wheel blues or case-hardens the points, they will crumble away and give trouble; and for this evil a nicely-running machine and an emery wheel of the right kind, kept faithfully dressed with a dresser, is the remedy. If the teeth are bent, ever so slightly, the grinder, though set squarely, will not do its work right. Bent teeth should be leveled going through the grinder and not afterward.

In hammering, the same patient care that is observed elsewhere should be observed even more. The hammer that fills the bill on the big saws will not always fill the bill on the delicate ones. A light hammer is best, one with a long, flat-oval face. Especial care should be given to the roots of the teeth, and one should not be misled into hammering too much or too little by the light that shows in the gullets. The leveling-block should be surfaced as frequently as it shows rounding on the edge over which the teeth are worked.

In rolling the thin saw, the roll line that will barely affect the thicker blade will often cause the little fellow to fly open almost from one edge to the other. One should move carefully here, indeed. The rolling should be very lightly done, and well distributed over the tight surfaces. Of course the rolls should not dish the plate; however, even with the most perfectly ground rolls, dishing will occur if the saw is held too high by the operator, or if it passes out at too sharp a downward or upward angle. It is an act of wisdom to apply the straight-edge upon the freshly-rolled surface, just to make sure.

Here is a little handicap in the thinner blade that is worth the mentioning: The relative amount of tension being the same, the thin saw will not flatten out on the leveling-block so readily as the thicker saw. The very best thin-saw filers I have known carried as much tension as they could level perfectly, using a weight on either end of the section being treated by the hammer. To go beyond that amount of tension, of course, would be to defeat one's purpose for the surplus metal of the central parts would bulge out into lumps, even if the plate could be leveled at the outset.

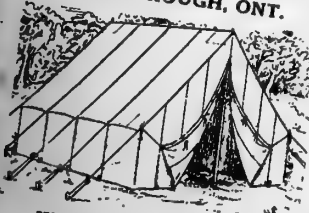
As to crown, one should be governed by the machine on which his saws are to be run. This I regard of great importance, and I gleaned the idea from experience. The degree of crown that suits a short saw running on wheels close together, is not the best degree of crown for a long saw on a machine with wheels far apart. A little experimenting is necessary, of course. Taking for granted the wheels are in line, with true faces, pull the crown out until the saw begins to flutter on the back; this is not an absolutely safe rule, but it will do as a rule to begin one's little experimenting on. On machines in good order, the correct amount of crown will run from 1-64-inch in 6-feet to 1-32-inch in 5-feet.

I did not leave the machine itself until the last because I regarded it of the least importance. If the best machine on earth is wrong in its adjustments, the best saw on earth won't run well on it. Too often a hand resawing machine is given a lining-up of its two principle shafts, and then expected to work miracles. Even if the two principle shafts and their respective wheels are in perfect level and line and well-fitted in their bearings, if the guide as it moves up and down is not in line with the saw there's trouble. And, even more important, if the rolls do not feed the stock squarely against the saw there's trouble. I have seen a few filers pull themselves out of a hole, and a bad hole, by putting the rolls and the guide where they belonged. To sum up, everything must be in favor of the extra thin saw if it is to hold its fitter his job.—Berlin Quality.

Leading Firms

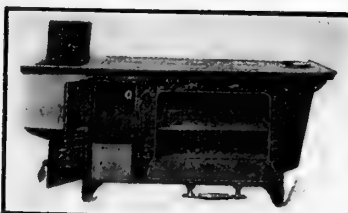
CATERING FOR
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SAW MILL BELTING

Note our NET PRICES per foot on NEW RUBBER BELTING

4 ply.	5 ply.
8" at 31c	8" at 36c
10" " 40c	10" " 47c
12" " 50c	12" " 60c
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Send for our Net Price List on Belting of every description,

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**Saddle Tank Locomotives
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Wing Screw Boot Calks

Made especially for Lumbermen



No. 5.

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Horse Collars**

(PATENTED)

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The Best Oats on the market. Let us fill your next order and prove what we say.

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Specific for Horses

A quick remedy for Cough, Broken Wind, Heaves, Colics, Worms and diseases of the Urinary Organs. It is a powder, not a liquid.

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COLLARS,
SADDLES**

TRADE MARK
"The Alligator Brand"
A complete line with several specialties for the Lumberman.

Samontagne Limited.
Balmoral Block, MONTREAL

Broom Handle Manufacture in Sawmills

A prominent manufacturer of broom handles was recently pressed for his opinion as to the advisability of sawmill operators engaging in the manufacture of broom handles as a side line. Speaking of this phase of the question the gentleman said:

"I don't want to discourage any one from entering into the manufacture of broom handles (although I think there are already enough handle factories in operation) but I would like to impress on those contemplating entering this line to investigate it carefully beforehand, figuring out exactly the product from a thousand feet of lumber, the cost of manufacturing it, and various other information necessary. As a rule figures based merely on the general run of information will show that there is a big profit available in the manufacture of broom handles, but a different conditions is shown on actual investigation of operations in some well regulated handle factories. For instance, every 5,000 feet of lumber sawed up through all the processes up to the time the handles are bundled into grades, will show that there is a great difference between actual facts and theoretical figures. There is a great variation in the way lumber will cut up, and there is also a variation in the rate of capacity of lathe. It will be found that the very best grade of maple lumber is necessary to make high-grade handles, and that high-grade lines are the ones that show the profit. Handles of inferior quality seldom bring enough to pay for the lumber. There will also be edgings from the rip saw, cull handles in the blanks and also finished that are not worth the value of the timber used. Of course it would be foolish to state that there is no money in the broom handle business, for if this were true very few people would be in it. There is a good profit in this line for concerns that know well how to buy their lumber, how to work it properly and grade it correctly, and further are familiar with the best methods of marketing their output. A reputation for specific knowledge of the handle business is a strong asset to the broom handle manufacturer.

"A sawmill concern of good standing manufacturing considerable maple, say from 5,000 feet up a day, ought to be able to make broom handles at a profit if it starts out in the right manner and is willing to learn by experience. Much difficulty is encountered in the actual manufacture of the handle, as it seems that the handle lathe is one of the hardest to operate. An inexperienced man can never be placed in charge of one of these machines, for as soon as this happens trouble will result. As long as a lathe is in perfect order any one can start it and can even grind and sharpen the knives, but when the knives are out of the correct shape or the heads are out of center, it is time to call in the experienced man. In fact experienced handlers of these lathes occasionally get into trouble and have to send to the factory for assistance in their adjustment.

"A sawmill man contemplating entering the handle business should first secure the services of an experienced broom handle manufacturer, one who is intimately acquainted with the best methods of manufacture; who knows all about handle lathes and the grading of handles, and who is also fairly familiar with market prices. A great deal of agitation in the market for broom handles is caused by small mills who make this business a side line, and who simply turn out the handles on any basis and market them without any definite idea of their actual value. The reason for the price cutting, of course, is that they do not know what it costs them to make a thousand handles. They feel that inasmuch as they are supplying the material themselves, it is an inexpensive item, whereas they should consider the cost to themselves exactly what it would cost any other manufacturer to sell it. At the end of the year they apparently figure a profit on this basis and are satisfied. Inexperienced men militate against the quality of the handles and result in a great production of low-grade

stock. It is necessary for every factory to turn out a certain percentage of low-grade handles—in fact this percentage often runs larger than is desirable—but the experienced handle manufacturer is constantly trying to cut down his percentage, and to get the price on these handles to a point where he can realize at least the value of the lumber contained in them. This effort is rendered particularly hard because of the fact that so many low-grade handles are being constantly put on the market.

"If the firms making broom handles as a side line would keep a close account on them for a month all through the factory, charging every legitimate charge against them as they would in any other line of a well regulated business, and would also keep a close account of the percentage of each grade when ready for the market, it is a safe conclusion that the handle market could be materially strengthened. If it is found that the handles are not of sufficient quality to bring the right price, then the remedy is to secure the services of some one who will show the firm how to manufacture."

"Handle manufacturers report that there should be a brisk demand for basswood lumber at this time of the year as the handle men usually lay in a supply of this wood to manufacture ceiling handles for winter and spring delivery. Basswood is well suited for this purpose on account of its light weight and the ease with which it is worked, also its ability to stay straight. However, unless it is well dried it will not go through the lathes. For this reason the handle men usually buy it early and dry it themselves.

"It would seem that the big sawmill firms are disposing of all their maple lumber for flooring stock and other lines, as it is very difficult for handle men to buy it at any price. As a consequence the handle man has to get his supply entirely from the smaller mills scattered all over the country, and while the price is usually less, the quality is decidedly inferior. In a great many cases these small mills ship stock which cannot be used. In some instances other wood, such as oak, chestnut, poplar and sycamore, is loaded with the maple. Of course this is an absolute loss to the handle man. In other instances valuable and more easily marketable woods, such as cherry and bird's-eye maple, are mixed with the ordinary handle stock.

"The demand for broom handles has been fairly consistent right along, where as in former years there was no trade at all during June, July and a part of August. While the business as a whole has been rather dull, still this unusual summer demand has brought up the aggregate volume considerably."—Hardwood Record.

R. G. Fletcher, secretary and treasurer of the Canadian North American Lumber Company, Limited, of Winnipeg, Man., is making a business trip in Ontario. The company is a wholesaling concern handling Pacific coast, mountain and north Saskatchewan products. Mr. Fletcher reports that the company is shipping considerable lumber into the States, the new tariff having opened a field not enjoyed by it before. The Saskatchewan product goes to Chicago in the shape of No. 2 lath strips for crating, etc. The business situation in the Prairie Provinces looks better, Mr. Fletcher said. The money stringency, he thinks, was a good thing and the people are now getting down to a sound business basis.

The Maple Dish Association, and organization of Manufacturers of Maple Dishes, formerly known as wire-end butter dishes, has been formed, with offices in Suite 44-45 Produce Exchange, Toledo, Ohio. The object is to secure greater publicity for the Maple dish. Points which will be emphasized in the publicity campaign will be the lightness, durability and sanitary features of the maple dish. All these dishes are cut from sugar maple timber.

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Fir and Cedar Doors Finish Casing Base and Mouldings

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Mills at Ruskin and Vancouver, B. C. | HEAD OFFICE: 445 Hastings St. West, Vancouver, B. C.

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"A corner in canvas."

Any style of TENT that you ever saw or thought of
SOLD or MADE TO ORDER by

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Jenckes Boilers

WE make a specialty of large Tubular Boilers for regular or Dutch oven setting for saw mill service. Our Boilers are built to conform with the various Provincial Inspection Acts and each is rigidly inspected and tested under high pressure before shipment.

Ask for quotation.

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Sherbrooke - Montreal - St. Catharines - Cobalt - South Porcupine - Vancouver - Rossland
Works : Sherbrooke, Que., St. Catharines, Ont.

The Spirit of Service in Retailing Lumber

By H. R. Isherwood*

The use of the word service as a concrete term to express a variety of trade acts and practices or as a feature of a business policy is comparatively recent. I think you are all familiar with the common meaning of the term service as applied in retail circles especially. Nevertheless I wish to ask your indulgence for a few moments to tell you a few things that I have learned about service and how I think it should be applied to our line of business.

It is not hard to believe that service as the basis of trade has existed since some wild ancestor traded in stone clubs and bearskins and provided free rocks for waiting customers in the most comfortable part of his cave.

Making customers comfortable is perhaps the earliest form of trade service. Until recent times its best example is perhaps shown by the spirit which prompted the old time tavern keeper to display the sign "Rest and Refreshment for Man and Beast." Hotel and restaurant keepers perhaps render more service than those engaged in other lines of business; but between their service and that which we wish to consider there is the difference that patrons of public places not only expect service but also have been educated to pay in proportion to the service rendered. The retail merchant can not charge for service in this open or, at least, understood manner, as service is most effective when least expected. The fact remains that service as a means of getting new trade and holding old customers in the face of competition is a recognized factor today.

The modern philosopher says that the man who never does any more than he gets paid for never gets paid for any more than he does. This is true not only of wage earners but it is true of those involved in every transaction. It is true of the dealings between the merchant and his customers.

Giving More Than Is Paid For

That something represented by "more than he gets paid for" is service. In the individual, it may take the form of loyalty or that habit of helpfulness which makes him single-minded in the interest of his employer. The merchant whose dealings with his customers cause them to say "I always like to trade at So-and-So's" is rendering the service that is bound to be profitable to him.

Here we touch upon the secret service. Service must be born of the spirit. Service, while best expressed in outward acts, needs the confidence and power of spirit, or else service is as impossible as perpetual motion.

When we conceived the idea of adding a service department to our business the things possible to do, to render and to give, seemed unlimited in number. Long before we conceived the idea of service as we are rendering it to-day we were making it a point to assist our customers and prospective builders in many ways. As they inquired for our prices on the different building materials we would question them in many ways. First we would inquire what they wanted to use this material for. Upon being informed for what purpose they contemplated using the material, either the erecting of a house or barn, we found that in nearly every instance our customer had only a hazy idea of the improvements contemplated. While we quoted prices upon the material inquired for, we made it a point to explain to them the advantage of having a sketch or plan of contemplated improvements, so that a list of material could be made up specifying the different kinds and grades to be used in construction; thereby getting their ideas into a definite plan.

Having in our office books of plans of buildings for city and farm use, we would offer these to our prospective customers, and we gave them such other assistance as we could to help them decide upon the plans of their future improvements and their construction. When the list of material was made up and presented to us we took personal interest and pride in discussing the different grades and kinds of materials, specifying the items on the list which would best meet each particular purpose. We learned not only that the assistance which we were rendering our customers was enabling them to erect more modern buildings in specifying the right material for the right place, but that the cost of the material was reduced by our aid in assisting them in the selection, without affecting our margin; and we learned of instances where our service had actually saved our customers a hundred dollars or more upon a single building, without any expense to us other than the time given in rendering the service. We soon learned that our customers were appreciating the service which we were rendering in many ways, and this is how we got the idea of adding a service department to our business.

Obstacles Easily Overcome

All of you who are rendering service, I am sure, have had similar experiences, and all of you, undoubtedly, have discovered the fact that the actually working out was simpler than it seemed in the beginning.

Long before our service department took concrete form we were,

to the best of our ability at least, and with the best of intentions rendering a service with every sale. To make this spirit practical was our task. The first step was to give it a name: "Sawyer Service" was adopted and from the start the name became a live topic with us and our patrons. Our next step was to arrange a room exclusively for our Service Department. The room that we set aside for the purpose is 12 x 20 feet in size. We finished the room up very attractively and tastily with book and sample cases, plan racks, drawing table, chairs, etc. Our next step was to gather up the odds and ends of practical service, with pieces of advice relative to building material and lumber in a concrete and practical form, such as plan books and books pertaining to the different kinds of materials used in the construction of buildings; magazines, blue prints, samples of building materials and booklets describing such materials as are furnished by the manufacturers; in fact, information pertaining to nearly every type and class of construction and material. Thus our spirit of Sawyer Service became more real and all of it made the rendering of such service easier.

Our next step was to advertise the Sawyer Service Department. We did this through the columns of our local papers, using quarters, halves and full-page advertisements, as well as road signs; and I want to say that we are more than pleased with the way our Sawyer Service Department idea has taken root with our patrons. We have just completed a four-page folder covering our Service Department.

"Helping others to help themselves" is one of our greatest pleasures. The plans and books on buildings and construction for any private individual to buy are far too expensive, for after he has completed his building the books would be of no further use to him. With us and our Service Department, however, not only one patron but a hundred or a thousand can use them, and in this way we have found our Service idea a big help to everybody.

Sawyer Service was established for the good of our customers. We believed then as we believe now, that whether a man buys his materials from us or not, if he makes use of Sawyer Service he is going to build better than he could without it and sooner or later we are going to get some credit for it, and that credit will show on our books in the shape of future sales. In the meantime we have rendered service, not only to that patron but to the whole community, in helping to build better than could be done without Sawyer Service, and in no instance are we losing sight of the fact that in making our Service Department a success we must deliver goods of quality and make prompt deliveries.

Service is Self Help

We have not only found our Service Department of benefit to our customers, but we have found it an educational feature in our own business. By setting aside this room and supplying it with the books and other matter pertaining to buildings and materials we have formed a ready reference library for our own use and for use in discussing ideas with our customers, helping them to decide in advance what is best for their particular needs and giving such information as relative values of the different materials, the quantities they will need, the cost, etc. In doing these things we are gaining better knowledge in every instance regarding the materials that enter into the construction of buildings. Even though a man never has been a patron of this company we extend to him the same courtesy.

Other Information Disseminated

We also have in our Service Department such bulletins as are issued by the State university pertaining to the different products grown in our section and these are free to the farmers. We are always ready to give any information that we possibly can to them, and if they desire any information not at hand we take upon ourselves the duty of getting it for them.

What we have done any of you can do. Every merchant is more or less a specialist in his particular line, and to be a specialist in any line is to know more of that line than the man who is otherwise engaged.

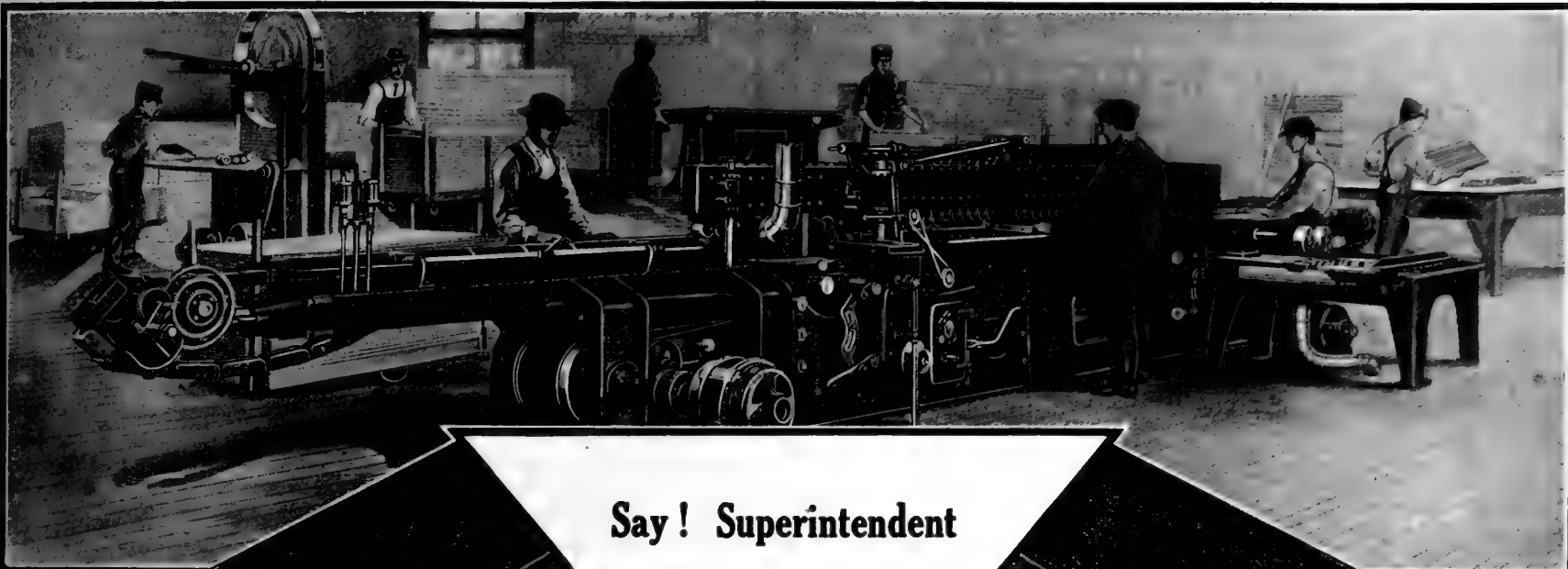
The dealer who takes the trouble to give information to his customers freely and gladly, without making them feel that they are placed under obligation, is rendering helpful service, service that is not only appreciated by his customers, but that means increased trade and profits.

Co-operation is one of the great economic forces. Service is the vital element of co-operation. We get what we give.

Rarely, if ever, do we find a man suffering alone from his wrongful act. Every wrongful act must bring suffering in some form, and so it is in this matter of service. The man who does not render service to his neighbor and community, to which, in a greater or less degree he must look for his very existence, is holding back many others in addition to himself.

Mr. Alexander McMillan, Vancouver, B.C., construction engineer for the British Columbia Mills Timber & Trading Company, died recently after a brief illness.

*Of Sawyer, Wis. Address delivered before Wisconsin Retail Lumber Dealers' Association



Say! Superintendent

Have you ever figured
the saving a

Linderman Dovetailer

would effect for us?

LET US FIGURE FOR A FEW MINUTES:—

We cut annually about M. feet of 4-in. common strips, average price per M. \$....., which totals..... \$——
8-in. and 10-in. shiplap brings \$..... per M. If all 4-in. strips were worked into 8-in. and 10-in. shiplap we would receive \$——

GROSS PROFIT ... \$——

COST OF JOINTING ON A LINDERMAN DOVETAILER 75c per.....
M.; cost of matching and handling, 50c per M. M. feet at
\$1.25 per M. \$——

NET PROFIT ... \$——

BESIDES, we cut M. feet of 4-in., 6-in. and 8-in., No. 3 grade lumber for which we receive \$....., but for our 10-in., 12-in., 14-in. and 16-in. No. 3 Grades we average \$..... per M. If all were made wide we would receive \$.....; cost of joining and handling \$1.00 per M. \$.....

NET INCREASED PROFIT.. \$——

BESIDES, if we had a LINDERMAN we could cut 2-in., 2½-in., 3-in. and 3½-in. strips instead of leaving them in the slab. We should get about M. feet. In the slab they are worth about \$..... In lumber they are worth about \$..... It will cost about \$1.25 to join and handle \$.....

NET PROFIT ABOUT ... \$——

BESIDES, we could work all our shorts into full 16-ft. lengths; make grain doors and save 10 per cent. of edging waste, work in our short shorts, besides using the machines for other purposes.

What say you Superintendent?

SHALL WE WRITE THE LINDERMAN PEOPLE AND INVESTIGATE?
It looks as though we are losing money. Let us send this information to the

Canadian Linderman Co. Limited

MUSKEGON, Mich.

Works at

WOODSTOCK, Ont.

OPPORTUNITIES



WE own and offer for sale on attractive terms a few especially well selected tracts of timber running from 50 million to one billion feet that are ready for immediate operation, having a good local demand at high prices.

The timber on the Pacific Coast is the last stand of the great forests. Well selected timber in British Columbia is the best investment on this Continent and offers especially attractive inducements for manufacturers.



For further particulars, address

A. C. Frost Company

Corn Exchange Bldg.

CHICAGO

LATH

Campbell - MacLaurin Lumber Co.

Limited

Board of Trade Building, MONTREAL

New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore

58 Front St. West, Toronto

EDGINGS

Ontario

John Piggott & Sons, Windsor, Ont., recently suffered a small loss by fire at their planing mill. The loss was covered by insurance.

E. C. Lawrence, Devine street, Sarnia, Ont., is considering the erection of a planing mill at a cost of \$12,000. He will be in the market for machinery, engine, boiler, etc.

Messrs. D. Gordon and A. W. Thornton have purchased the lumber business of McNairnie Bros., Wallaceburg, Ont. A few weeks ago they also bought out A. Wickens, dealer in lumber.

The Toronto Lumber Company, 432 Logan Avenue, Toronto, have awarded a contract for the erection of a planing mill at a cost of \$2,000, the general manager being Geo. Jordon, 432 Logan Ave.

The John Goodison Implement Works, at Sarnia, Ont., recently suffered a serious loss by fire, in addition to part of its plant and stock of agricultural implements, the company lost a large quantity of lumber which was piled in its yards.

A report has recently been circulated to the effect that the Standard Chemical Iron & Lumber Company of Toronto intend to erect a sawmill at Eganville, Ont. The company advise us that they have never had any intention of doing so.

The mill at Wiarton, Ont., formerly owned by Mr. E. M. Miers, and which was recently purchased by Chas. Pedwell, of Lions Head, will continue to be operated at Wiarton. Mr. Pedwell reports that he has no intention of rebuilding at Lions Head.

The Riordon Pulp & Paper Company have awarded a contract to W. J. Trimble, 152 Bay Street, Toronto, for an addition to their pulp mill at Merriton, Ont., at a cost of \$60,000. The building will be three storeys, of stone construction and stone foundation, with electric lighting, steam heating and pine floors.

The planing mill belonging to the R. Laidlaw Lumber Company, at the corner of Eastern Ave. and St. Lawrence Street, Toronto, recently suffered a very heavy loss by fire. The building was destroyed and the damage to the plant and lumber piles amounted to about \$50,000, most of which was covered by insurance.

The Montreal Box Board Company, Limited, has been incorporated with a capital of \$500,000, with head office at Montreal, Que., to carry on business as manufacturers of paper, pulp, or strawboard, boxes, etc. The provisional directors are J. W. Blair, advocate, and F. J. Laverty, K.C., of Westmount, Que.; and C. A. Hale, advocate, of Montreal, Que.

The incorporation of the John C. Gilchrist Lumber Company, Limited, of Toronto, was recently announced in these columns. The company report that the object of the incorporation is to continue the business formerly carried on under the private name of C. Gilchrist at 188 Perth Ave., Toronto. The directors are John C. Gilchrist, president; Geo. H. Gilchrist, vice-president; Geo. C. Paterson, secretary-treasurer, and Sinclair M. Gilchrist.

The Colonial Lumber Company, Pembroke, Ont., have purchased from Fraser & Company of Ottawa, their Deep River Limit, which has an area of about 170 square miles and about 20 square miles of frontage up the Ottawa River. The limit contains a large amount of first class pine, much of which has never been cut, except for the purpose of picking up a few sticks of timber many years ago. The limit also contains a large amount of oak and birch which, on account of its close proximity to the company's mill, can be manufactured to advantage. The lower part of the limit is on Allumette Lake, within thirty miles of the mill. The hardwood logs can be mulinnetted with soft wood and towed to the mill, or brought down by steam barge. The Colonial Lumber Company expect to increase their present output by three to five million feet of hardwood per year, comprising oak, birch and maple. They expect to commence operating upon this limit during the coming season.

Eastern Canada

The sash and door factory of Mr. H. Fauteaux, Fauteaux Lave, Montreal, has been slightly damaged by fire.

The sawmill at St. Jerome, P.Q., owned by Joseph Bouchard, was recently destroyed by fire. The loss amounted to \$5,000.

Poulin & Bessette, sash and door manufacturers, Cowansville, P.Q., have been registered. The members are S. Poulin and R. Bessette.

A small sawmill, owned by Daniel M. Silass, was destroyed by fire recently at Eel River, N.B. The loss was about \$3,000, and the insurance \$1,000.

The Brompton Pulp & Paper Company, East Angus, P.Q., have drawn up plans for a new pulp mill and power house. The mill will be two storeys, 72 x 144 ft. and the power house will be one storey, 52 x 108 ft. The engineer

is C. A. Ring, East Angus. The buildings will be of brick and steel construction, with concrete foundation.

Stebbens & Menard, sash and door manufacturers, St. Paul d'Abbotsford, Que., have been registered. The members are Joseph Stebbens and P. H. Menard.

The sash and door factory belonging to Z. Berthiaume, 694 Alma Street, Montreal, P.Q., was recently destroyed by fire. The loss, which amounted to \$4,000, was covered by insurance.

The Standard Pulp and Lumber Company, Limited, has been incorporated, with a capital of \$1,000,000, with head office at Montreal, Que. The provisional directors are C. Beauchemin, J. A. Richard, and P. Lavigne, lumber merchants, of Montreal, Que.

The Beauce Pulp & Lumber Company, Quebec, P.Q., who lost their mill at Scotts Junction by fire last July, report that they have sold all their property at Scott and on the Chaudiere River to the Quebec & St. Maurice Industrial Company and therefore will not rebuild the mill.

La Compagnie Industrielle Lacroix de Contrecoeur, Limitee, has been incorporated, with a capital of \$49,000, with head office at Contrecoeur, Que., to carry on business as dealers in timber limits, sawmill owners, etc. The provisional directors are J. A. Lacroix, manufacturer, and F. X. Gervais, of Contrecoeur, Que.; A. Lacroix, joiner; J. A. H. Dequoy, notary, and J. Lamoureux, of Montreal, Que.

Finch, Pruyn & Company, Inc., Glens Falls, N.Y., expect to start their new steam sawmill, on the Henri River near Laurier Station, on the Intercolonial Railway, about April 1st. They have a large cut of logs ahead at this point. The mill will cut both hardwood and soft wood, but will commence upon the hardwood first. The mill is up-to-date in every respect being furnished with entirely new equipment, including a band saw, vertical resaw, lath mill, etc., with a large piling ground, ample railroad siding and other conveniences. The logs will be brought to the mill by rail and it will be possible to cut all lengths up to 32 ft. long. A number of buildings have already been erected in the vicinity of the mill.

Western Canada

McVicker & Burke, Vancouver, B.C., have erected a shingle mill at Burquitlam, which will be operated by electricity.

The Stern Lumber Company, Limited, has been incorporated, with a capital of \$10,000, with head office at Donalda, Alta.

The Parks Lumber Company, Verwood, Sask., recently suffered loss by fire at their lumber yards, to the extent of about \$3,000.

Preliminary contracts have been let by the Empire Lumber Company in connection with the large plant which it will establish on Vancouver Island.

The Western Canada Lumber and Building Company, Limited, has been incorporated, with a capital of \$300,000, with head office at Saskatoon, Sask.

A report from Blairmore, Alta., states that the McLaren Lumber Company contemplates the erection of a mill at a cost of \$200,000, and that the company will require new machinery, boilers, etc.

L. H. P. Lloyd's mill at Westholme, Vancouver Island, has been bought by R. S. Henderson, of the Tyee Lumber Company, who now has four mills on the island, with a capacity of 125,000 feet daily.

A report from Chilliwack, B.C., states that Mr. H. Windebank of Mission has purchased 1,000 acres of timberland on Silver Creek and intends to log it. He will build a mile of railroad to reach the timber, also a dam to conserve the water supply on Silver Creek.

F. T. Cruttenden, Lethbridge, Alta., will shortly call for tenders for a planer, jointer, lath trimmer, saw table, 5 h.p. motor, 10 h.p. motor, 2-phase, boring machine and five quick acting vices. He plans to invest about \$2,000 in equipment for his woodworking plant.

The Coast Range Cedar, Shingle & Lumber Company, Limited, has taken over the premises of the Cedar Cove Sash and Door Factory at Cedar Cove, Burrard Inlet, B.C., and have installed shingle machines and cedar manufacturing machinery. John Thompson of Vancouver is the principal member of the firm.

A report was recently published to the effect that Mr. E. J. Chamberlain, president of the Grand Trunk Pacific Railway was interested with others in the erection of a mill at Dowe Creek, on the Upper Fraser River. Mr. Chamberlain advises us that this report is incorrect and that he is not interested in this or in any other lumber company doing business along the line of the Grand Trunk Pacific Railway.

The British Columbia Sulphite and Fibre Company, which owns a pulp mill on Howe Island, B.C., has bought from the provincial government 1,070 acres of timber on Sutlej Channel and are undertaking to have the area cleared in three years. The holdings comprise 6,000,000 feet of hemlock, 2,000,000 feet of larch, and 3,000,000 feet of cedar, the hemlock and larch bringing ten cents a thousand in addition to the royalty and the cedar 25 cents a thousand. For 950 acres on Broughton Island, bought by the same company, 15 cents was paid for the hemlock and larch, and 40 cents for the cedar in addition to the royalty. The timber contents of the latter area are 9,000,000 feet of hemlock, 4,000,000 feet of larch and 1,500,000 feet of cedar.

Spruce Lumber

1 x 4/5		2 x 6
1 x 6	Well Graded	2 x 8
1 x 8		2 x 10
1" Cull	Evenly Sawn	2 x 12
1" Waney	Prompt Shipment	2 x 5/7/9/11
1 x 10		Spruce Lath

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Spruce
and Hardwoods

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We carry a large stock of

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Spruce
Lumber and Timber**

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Waterous Engine Works

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Dixon Crucible Co., Joseph

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Educational Talks on Leather Belting.

Progress Made in the Manufacture of Leather Belting

In the construction of leather belts in the early days of the industry, the whole hide was cut into strips which were riveted together, so that the one grade of belting produced was made from leather that varied in quality, thickness and weight. This belting for several years answered all purposes for which belting was used.

The development of modern efficient machinery necessitated the manufacture of higher grade belting to meet the increasingly severe requirements.

Careful study in work-shop, testing-room, and laboratory has resulted in the selection of of hides, and the adaptation of processes and materials to produce several brands, or weights of high quality belting each peculiarly suited to certain conditions of service.

The rigid maintenance of this exact standard of quality, weight and thickness for each brand, in contrast to the old-fashioned methods mentioned above, is of vital importance, as it assures under similar conditions uniform service from any given brand of belting.

The improvement in leather for belting would have availed little had we not at the same time perfected a cement for joining laps, the use of which has superseded the old-style weak-riveted joint, and proven in actual service the strongest and most efficient method of constructing belts.

To determine the most efficient and economical quality, weight and thickness of leather belting for any particular drive it is essential to know:

First:—Whether for a horizontal drive or vertical drive.

Second:—Open drive, drive with idler, or quarter turn drive.

Third:—Diameter of pulleys.

Fourth:—Revolutions per minute of driving pulley.

Fifth:—Horsepower to be transmitted.

Oak Tanned Leather Belting, as it has been developed, is recognized as the best belting for ordinary conditions. For certain unusual and exacting demands, however, we make a belt—our SPARTAN BRAND—using specially tanned leather and special cement—a belt remarkable for its pliability and, consequently, increased pulley grip, great tensile strength and resistance to steam, water, oil, heat and chemical fumes.

A comparison of the crude leather belting of early days, with our remarkably efficient modern product, will prove that our industry is well abreast of the day in mechanical progress.

Subject for next month:—“*Proper Selection of Belts*”

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Long Lumber Company
McGibbon Lumber Company
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Leak & Company
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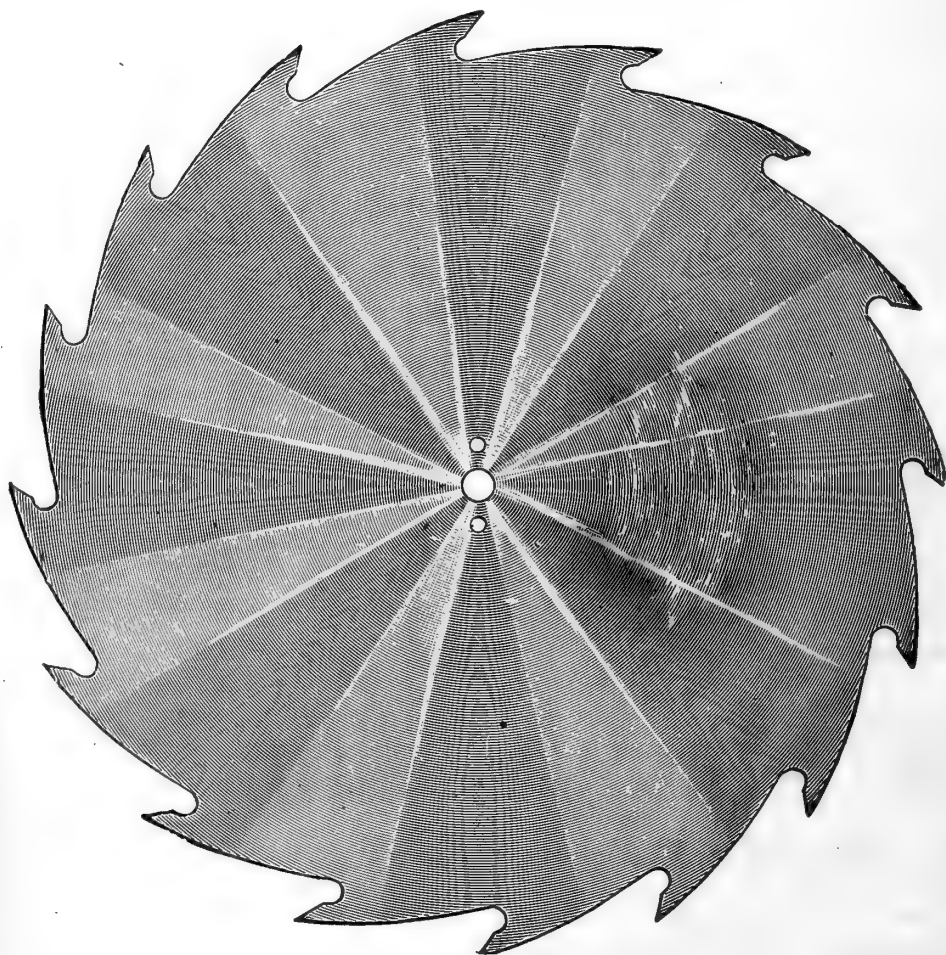
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Made by men who have made a special study of saw construction and steel tempering.

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**SPECIAL
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LEATHER
BELTING.**

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are designed for hard service. The joints are all stitched, as well as cemented.

The cost is a little more than for Ordinary Leather Belts, but they are more than worth the difference.

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Of course you would!

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Pay for Bags, Sacking, Freight, Handling,
Cadging on light dirty oats, when the
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Heavy, Clean, "National" Oats

purchased direct from producers and
shipped from our elevators in the heart
of the best oat sections of the Western
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Write or wire for quotations

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Port Arthur, Ont.

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**Not altogether what we
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"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a log containing 60,000 logs,
in calm weather, 30,000 in a head wind.

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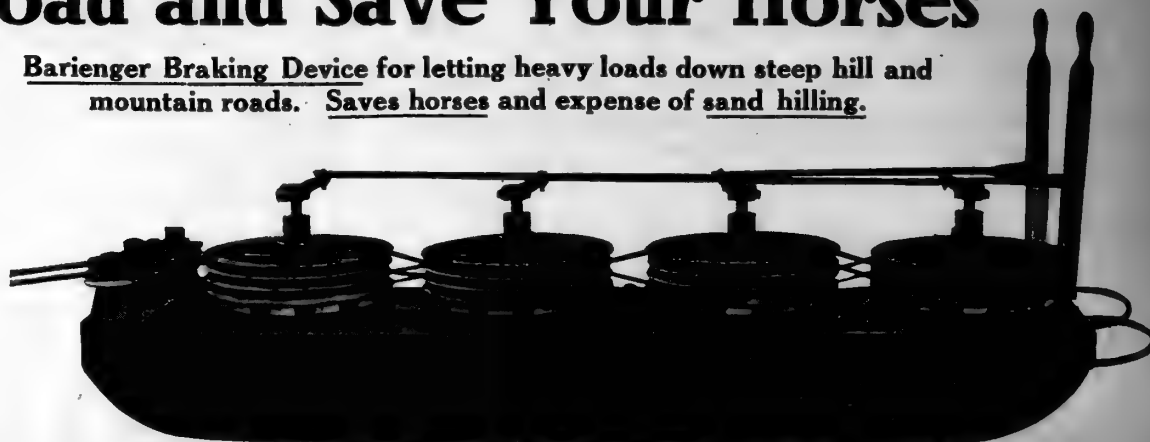
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Saw and Planing Mills

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View 2.

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This new swage invented by ourselves has all the good features of other swages plus some special patent features of its own. Those practical saw men who have used this swage pronounce it "The best yet."

View 1 illustrates a swage sawn in half to show its method of working. The tooth is swaged by a series of three rollers which cannot bind. The tooth is rolled out and not drawn.

A double thread is used on the locking lever. The first thread is rapid so that a slight movement of the lever allows the swage to travel on the saw without being lifted over each tooth. The second thread is slow so that the swage may be securely locked on the saw. The point at which the rapid thread ceases and the slow thread operates is governed by an automatic spring.

We offer for sale the United States Patent. If interested write us.

Breeze, Denison & Co.
Newburgh, Ontario

They Have Brought Both Sides of the World Closer Together

While the first Band Saws were made and used abroad, it is in America that they have seen their greatest advances—both in manufacture and use—for in France the early Band Saws were narrow and used only for such work as scroll sawing. It was left to America to improve the Band Saw and first apply it to the manufacture of lumber. In their efforts to keep pace with the increasing requirements of millmen Henry Disston & Sons have brought the Band Saw to its present high state of perfection.

The fame of Disston Band Saws, however, has not been confined to the Western Hemisphere. Their use has spread out year by year, from country to country. We are now shipping Band Saws to all sections of the World.

DISSTON BAND SAWS

"They make the world go round"



They have brought both sides of the World closer together for if a club were formed of Disston Band Saw users its members would be found in almost every country on the globe.

When you take into consideration the vastness and importance of the lumber and woodworking industries all over the world, and the fact that the majority of those who use Band Saws insist on the Disston Brand, it can truly be said that "they make the World go round." No matter where you are located there is a Disston Branch near enough to give you all the facts. Write them, and "Depend on Disston."



Reg. U. S. Pat. Off.

Henry Disston & Sons, Limited
Keystone Saw, Tool, Steel and File Works
TORONTO, CANADA
Branch at Vancouver, B. C.

Knight Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

Size Husk 3 feet by 6 feet 3 inches
Diameter and Length Mandrel . 2 3/16 by 55 inches
Size Drive Pulley 20 by 10 inches
Feed per Revolution of Saw 0 to 3 1/4 inches
Feed Belt 4-inch Gandy
Largest Diameter Saw 56 inches
Length of Carriages 12, 16, 20 or 24 feet

Width of Carriages 33 inches
Trucks 7-inch wheels and 1 1/4-inch axles
Length Track 32, 40, 48 or 56 feet
Style and Opening of Blocks C1-36 inches
Style Mill Dogs Pony Excelsior
Style Set Works No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

Size "S" Single Mill with 16-foot Carriage

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C.. E. Long Mfg. Co., Orillia, Ont.

ENGINES and BOILERS

OF ALL TYPES AND SIZES

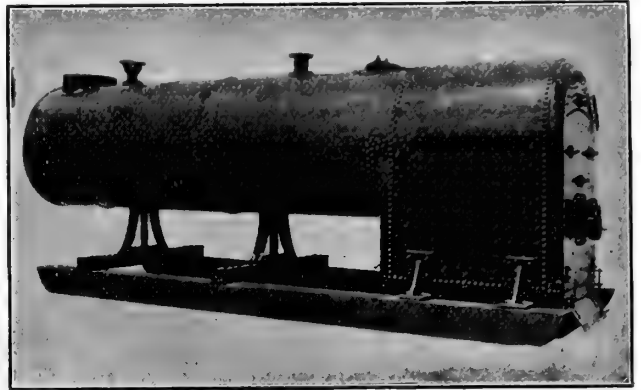
HEATERS, STACKS, RETORTS, TANKS

We cater specially to the lumbering industries

Write for Prices and Information

E. LEONARD & SONS,
LONDON, CANADA LIMITED

Agencies and Warehouses:—ST. JOHN, N.B. MONTREAL, QUE. TORONTO, ONT.
WINNIPEG, MAN. CALGARY, ALTA. VANCOUVER, B.C.



Locomotive Boiler on Skids

Atkins Inserted Tooth Cut Off Saw



The construction of this splendid Saw will appeal to you at once. It will save you lots of money if you have cut off work to do. It's the sensation of the Saw World. Making good wherever used.

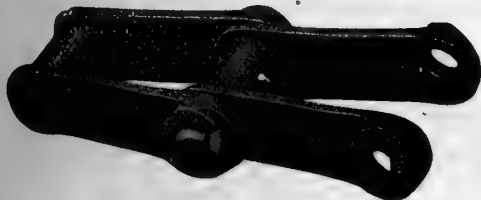
Write for details and prices

E. C. Atkins & Company

Makers of Sterling Saws

Factory, Hamilton, Ont.

Vancouver Branch, 109 Powell St.



Griplock Riveted Chain Belt



Section of Griplock Riveted

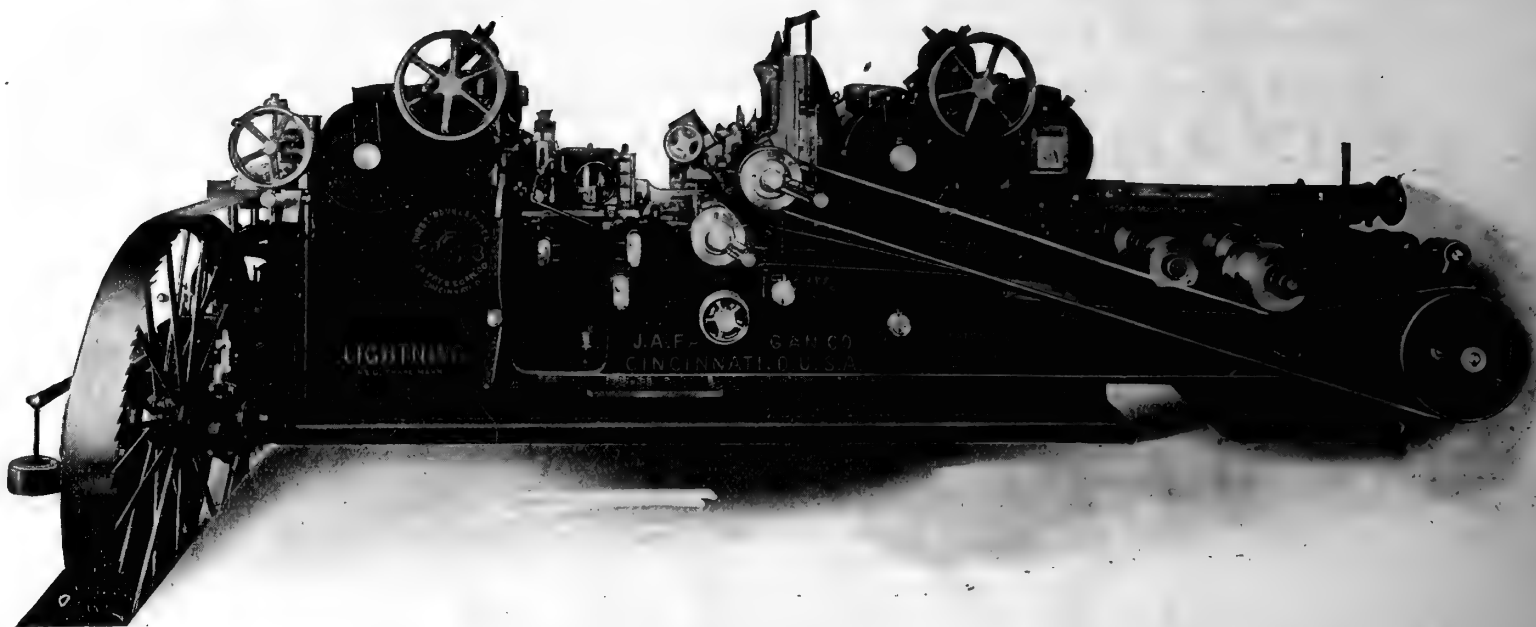
No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis., a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

We would be very glad to mail you sample links for your inspection.

Sold by **The A. M. ELLICOTT CO., Montreal, Que.**
Elevating, Conveying and Transmission of all kinds a specialty

Have you investigated this Wonderful Cost Reducer?



A ^{FAY-EGAN} "LIGHTNING" 333-335 Matcher-Resaw Outfit lowers manufacturing cost by eliminating handling, increasing output and raising grades

Because of keen competition, you lumbermen are studying methods of lowering manufacturing costs. You must give your customers good lumber and still make your profit.

Manufacturing costs can be lowered in two ways—by eliminating handling, and by doing away with degrading loss due to manufacturing defects.

To illustrate the first, investigate the Fay-Egan 333-335 Matcher-Resaw with Resaw below the bed-line of Matcher.

By your old methods, you make bevel siding, shiplap, ceiling, etc., double thick on a Matcher at about 75 ft. a minute, then you truck to a Resaw and feed at about the same rate. This requires two feeders and two off-bearers and a whole lot of your stock is torn out, fuzzy, uneven and otherwise lowered in grade.

With a 333-335 you match double thick and resaw in one operation, requiring only one feeder and one off-bearer—instead of 75 ft. you get 200 ft. a minute and every bit of your stock grades up to No. 1.

This means a reduction of at least 50% in manufacturing costs and an increase of from 10 to 30% in market value of your product.

You may be making pattern work—then you should investigate the 333-288 Matcher-Profilor.

Or if you are getting out flooring or plain four side matching, look into the regular 333 Matcher.

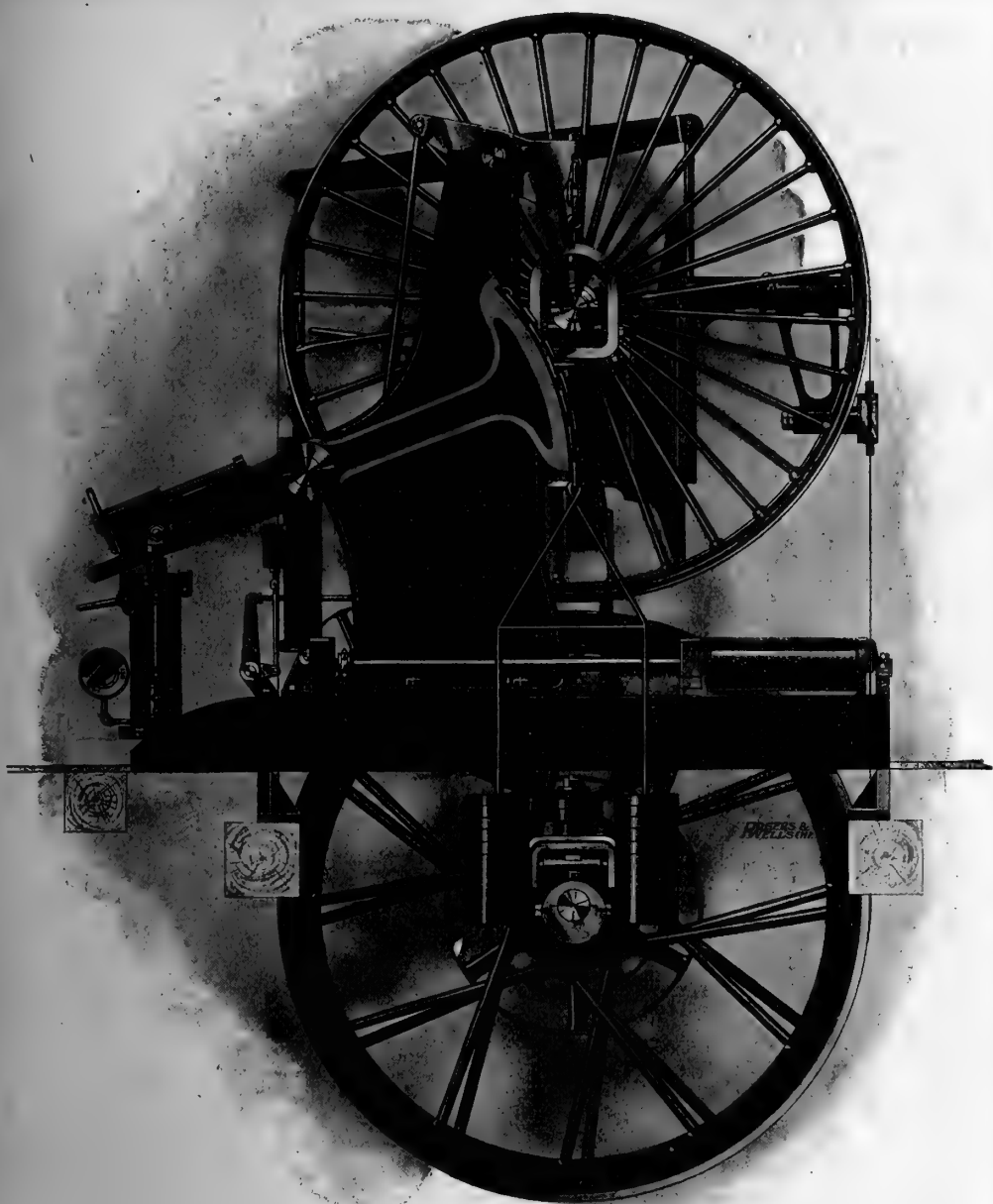
A "333" installation is made up of units which can be coupled together to meet your individual requirements.

Let us study the proposition with you and for you.

As a starter along this line, read our book on Fast Free Matchers, Surfacers and Appliances. A copy will be sent free upon request if you use your own or company letter head. Ask for Book No. 87

J. A. FAY & EGAN CO.

465-485 W. Front St., Cincinnati, Ohio, U. S. A.



The Steam Tension Band Mill

THE top guide on this mill, as well as the upper wheel, is operated by a steam cylinder.

This means that the guide can be moved up or down instantaneously, which in one day's work means quite a saving of time over the ordinary mill. This goes a long way towards paying for the mill by the end of a year.

But this is not all—with this steam operated guide it is just as easy to keep the guide close to the cut as it is to set it for certain size logs and keep it

there. This can be done without loss of time, and so by bringing the guide down close to the cut, vibration of the saw is done away with and the quality of the lumber is improved.

No form of tension yet devised is as easy on the saws as the steam tension—several of the users of this mill have run through an entire season without cracking a single saw.

These are some of the reasons why our steam tension band mill is the most economical mill to buy, and there are others which you will find in our catalogue.

When you are tuning up your mill this winter for next season's operations, remember that we can serve you promptly whatever your requirements may be.

William Hamilton Company, Limited

PETERBOROUGH, ONTARIO

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	\$55 00	57 00
1½ inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	45 00
5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	36 00	36 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
4/4 No. 3 cuts	28 00	28 00
5/4 and 6/4 No. 3 cuts	32 00	32 00
8/4 No. 3 cuts	33 00	33 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
1 x 10 and 12 mill cull stocks	24 00	24 00
1-in. mill cull sidings	22 00	22 00
5/4 and 6/4 x 4 m.r., m.c. out.	26 00	26 00
5/4 and 6/4 x 5 m.r., m.c. out.	26 00	26 00
5/4 and 6/4 x 6 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out.	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out.	36 00	36 00
2 x 10 common	26 00	26 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1½-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill culls	20 00	20 00
Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16 ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 50	24 50
2 x 4 to 12-in., 12 and 14 ft.	23 50	23 50
2x4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 20 ft.	28 00	28 00
2 x 4 to 12-in., 22 ft.	27 00	27 00
2 x 4 to 12-in., 18 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00	34 00
6x10, 6x12, 8x10, 8x12, 10x10, 12x10, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	34 50	34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00	35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 50	35 50
10x20, up to 32 ft.	36 00	36 00
6x18, 8x18, up to 32 ft.	36 50	36 50
6x20, 8x20, up to 32 ft.	37 50	37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	44 50
No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1½, 1½ and 2-in. Fir rough	47 00	47 00
1½-in. No. 1 4-ft. pine lath	4 50	4 50
1½-in. No. 2 4-ft. lath	4 20	4 20
1½-in. 32-in. pine	1 60	1 60
1½-in. No. 1 4-ft. hemlock lath	3 75	3 75
1½-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XX B. C. cedar shingles	2 25	2 25
XXX 6 butts to 2-in.	3 20	3 20
XXXX 6 to 23-16-in.	3 40	3 40
XXXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	60 00
Ash, white, No. 1 common	45 00	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	39 00	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	39 00	39 00
Birch, No. 1, com. and bet., 4/4	33 00	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, No. 2 and 3, common	18 50	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	48 00	48 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nds, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, plain, 1st and 2nds, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1½ and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, ¼ cut, 6/4 and 8/4, 1sts and 2nds	88 00	88 00
White oak, ¼ cut No. 1 common	55 00	55 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1½-in. & 1½-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	45 00
Pine good strips:		
1-in.	40 00	42 00
1½-in. and 1½-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1½-in. and 1½-in.	60 00	64 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1½, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6' 11' 1' x 10'	24 00	25 00
Pine, box boards:		
1" x 4" and up 6' 11'	17 00	18 00
1" x 3" to 6", 12' 16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r. & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1" x 7"		
and up	20 00	21 00
Mill run Spruce:		
1" x 4" and up, 6' 11'	17 00	18 00
1" x 4" and up, 12' 16'	18 00	20 00
1" x 9" 10" and up, 12' 16'	22 00	24 00
1½" x 7" 8-9" and up, 12' 16'	22 00	24 00
1½" x 10" and up, 12' 16'	22 00	24 00
1½" & 2" x 12" and up, 12' 16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 00	4 35
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 00	3 25
Red pine mill run	3 25	3 60
Hemlock, mill run	2 75	3 00
32-in. lath	1 80	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70	75
Oak—Michigan and Ohio		
By the dram, according to average and quality	65	72
Elm		
By the dram, according to average and quality, 40 to 45 feet	80	90

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 23
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1½ and 1½ in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 62 00
8/4 x 6 and up No. 2 and better 64 00
6/4 x 6 and up No. 3 and better 48 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1½ in., 8-in. and up wide 55 00
1½ in., 8-in. and up wide 57 00
2 in., 8-in. and up wide 60 00
2½ and 3 and 8-in. and up wide 75 00
4 in., 8-in. and up wide 85 00

No. 2 Cuts

1 in., 6-in. and up wide 31 00
1½ in., 6-in. and up wide 42 00
1½ in., 6-in. and up wide 44 00
2-in., 6-in. and up wide 47 00
2½, 3 and 4 in., 6-in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide 24 00
1½ and 1½ in., 6-in. and up wide 33 00
2-in., 6-in. and up wide 33 00
2½, 3 and 4 in., 6-in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 13 in. and up 34 00
1½, 1½ and 2-in. 30 00

No. 1 Barn

1 inch 81 00 45 00
1½, 1½ and 2-in. 36 00 45 00
2½ and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1½, 1½ and 2-in. 30 00 36 00
2½ and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1½, 1½, 2-in. 20 00 25 00

Box

No. 1, 1, 1½, 1½, 2-in. 22 00 25 00
No. 2, 1½, 1½, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1½, 1½ and 2-in. 20 00
No. 2 17 00 18 00

Lath

No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimensions, Rough or S. 1 S. and 1 E.
6 ft. 8 ft. 10 ft. 14x16 ft.
2 x 4 15 00 18 00 22 00 20 00
2 x 6 18 00 18 00 22 00 20 00
2 x 8 18 00 18 00 22 00 20 00
2 x 10 19 00 19 50 22 50 21 00
2 x 12 19 00 20 00 24 50 22 50

PINE, SPRUCE, TAMARAC & LARCH

Mountain Stock

Dimensions
2 x 4-12 20 50
2 x 4-8-14-16 20 50
2 x 4

NOTICE

Dealers and Contractors

This 200 page handsomely bound
Stock Millwork Catalogue

brimful of useful information is free to Bona-Fide Dealers and Contractors only.



The Wm. Rutherford & Sons Co.

Limited

425 Atwater Avenue

MONTREAL, P.Q.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24

RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22

SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22

BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23

PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00	55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00	40 00	

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	
No. 1, 1 x 8	37 00	
No. 2, 1 x 12	40 00	42 00
No. 2, 1 x 10	35 00	36 00
No. 2, 1 x 8	34 00	35 00
No. 3, 1 x 12	32 00	33 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	29 00	

Canadian spruce boards	25 00
Spruce, 10 in. dimension	28 00
Spruce, 12 in. dimension	29 00
Spruce, 9 in.	25 00
Spruce, 8 in. and under dimen.	24 00
10 and 12 in. random lengths, 10 ft. and up	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00 22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00 21 50
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00

1 1/4-in. spruce laths	4 40
1 1/2-in. spruce laths	3 80

New Brunswick Cedar Shingles	
Extras	3 55
Clears	3 10
Second clears	2 90
Clear whites	2 00
Extra 1s (Clear whites out)	1 50
Extra 1s (Clear whites in)	1 00
Red Cedar Extras, 10-in. 5 butts to 2-in.	3 55
Red Cedar Eurekas, 18-inch 5 butts to 2-in.	4 25
Red Cedar Perfection, 5 butts to 2 1/4	4 30
Washington 16-in. 5 butts to 2-in. extra red clear	3 50 3 80
The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4c per ft. All F.O.B. Jamestown, New York.	

Is there Rosin in Cling-Surface?

Cling-Surface contains less free organic acids than any other manufactured or natural substance suitable for the treatment of belts and ropes.

That Cling-Surface contains only the purest and most preservative materials is evident from the following reports of the highest authorities in their respective fields and countries: Prof. Orndorf, Cornell University:

"No rosin, no free alkali, no free mineral acid, no free ammonia present."
Ernest J. Parry, B.Sc., T.J.C., F. C. S., Analytical Chemist, London:

"Free from any matter which would have corrosive effect on leather, canvas, cotton or similar fibers. In my opinion a perfectly suitable lubricant for leather belts or fibers of any kind."

Dr. J. Gordon Parker, London:
"No mineral acids, nor was I able to find any ingredients likely to be detrimental to leather, canvas, cotton or other belting. It acted very beneficially on belting in my laboratory."

Dr. Gartenmeister, Elderfield, Germany:

"No mineral or other damaging products, no tar, rosin or rosin oil. No products which would damage leather, camel's hair or cotton belts or hemp or cotton ropes."

Prof. E. Karsch, of Cologne, received the following report from the German Royal Material-Testing office:

"Free mineral acids, free alkali and resin are not present. Mineral substances, wax, resin, resin oil and free

organic acids are not present in any quantities which can be detected."

We might continue references endlessly, but the use of Cling-Surface all over the world for sixteen years has been the best demonstration of its basic value.

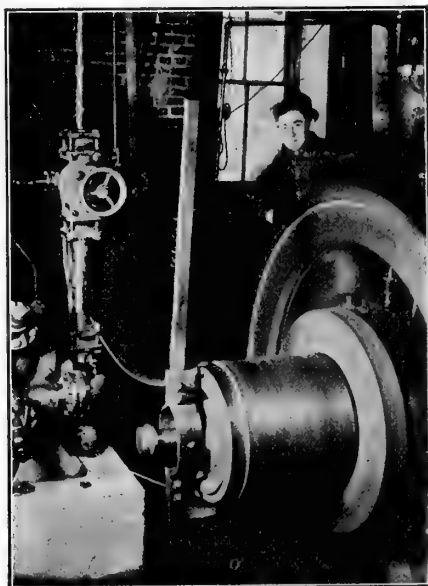
Every pound of Cling-Surface is guaranteed. It must satisfactorily stop slip and preserve the belts or ropes, or you can have your money back. Write for literature.

We quote f.o.b. Toronto.

Cling Surface Co

1021 Niagara St Buffalo NY

New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 58



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The Canada Metal Co., Ltd.,
Manufacture in Canada—



Harris Heavy Pressure

"The babbitt metal without a fault"

The prime favorite with all engineers

The best babbitt for all general machinery bearings

Manufactured and Guaranteed by

Canada Metal Co., Limited

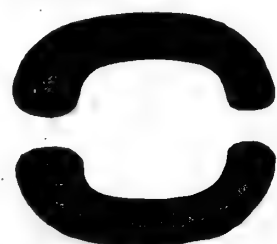
Head Office and Factory, Toronto, Ont.

Branch Factories: Montreal, Winnipeg

Order a Box From Our Nearest Factory

"AJAX" Loading Chain

WELD:



Sectional view showing comparative size of weld and chain.

Experience has taught us that a good chain cannot be made from cheap material. In Ajax chains you get the best steel obtainable and every weld guaranteed. Ajax chain is guaranteed to pull stiff before breaking.

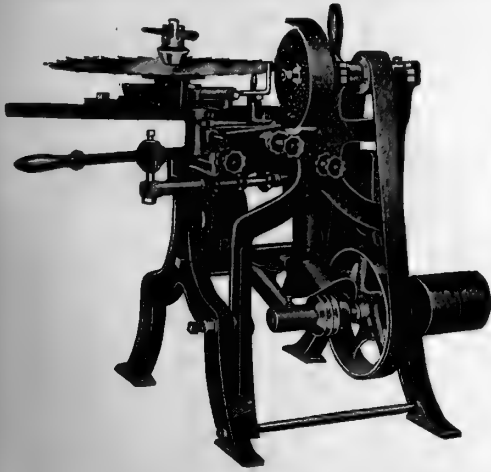
MANUFACTURED ONLY BY

Standard Chain Company, Pittsburgh, Pa.

MONTREAL—Alexander Gibb, St. Nicholas Bldg.

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Save Money

by using one of our Automatic Saw Sharpeners. Saws sharpened on them will do better work and more of it.

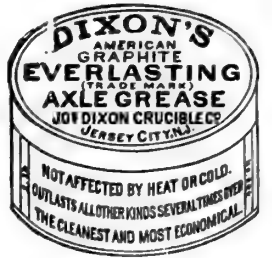
This cut illustrates our our No. 1 Circular Saw Sharpener, fitted to handle a saw up to 40 inches diameter.

We make a complete line of Automatic Knife Grinding and Saw Sharpening Machinery.

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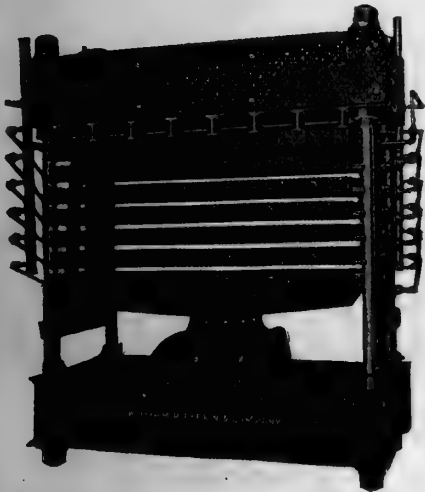


One application of this grease will last two or three times as long as any other grease. That means a saving of grease and time and trouble. The Dixon's Flake Graphite in the grease is the secret of its lasting qualities. Send for sample and Booklet No. 238.

Made in JERSEY CITY, N. J. by the

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Established 1827



Veneer Press and Dryer

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

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WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

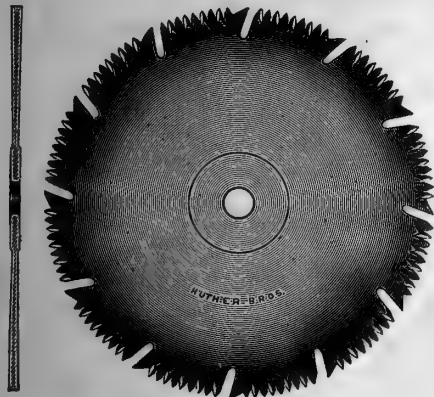
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Harry F. Moulden & Son

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ONTARIO

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George W. Laidlaw

HUTHER BROS.
Hollow Ground Combination Tooth Mitre Saw Patent Groover or Dado Head



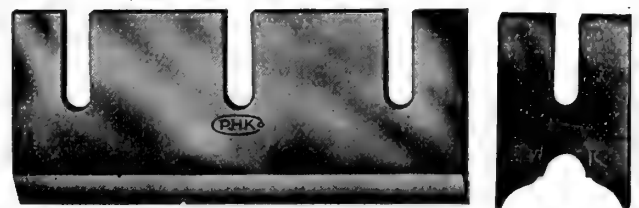
For either Rip or Cross Cutting
Will cut equally as smooth in either Ripping, Cross-cutting or cutting at an angle of 45 degrees, with grain of wood.

Allow us to quote Prices on Saws for any special work that you wish to do.
HUTHER BROS. SAW MFG. CO. Inc., 1103 University Ave., ROCHESTER, N. Y.



Can be used on any Circular Saw Mandrel
For cutting any width groove from 1/8" to 2" wide. Will cut either with or across the grain. (Sent on approval).

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All kinds of overhead cranes for hand power or electric power.

JOHN T. HEPBURN, Ltd., 18-40 Van Horne St. TORONTO
Iron founders, crane makers, machinists

Hepburn Cranes and Derricks



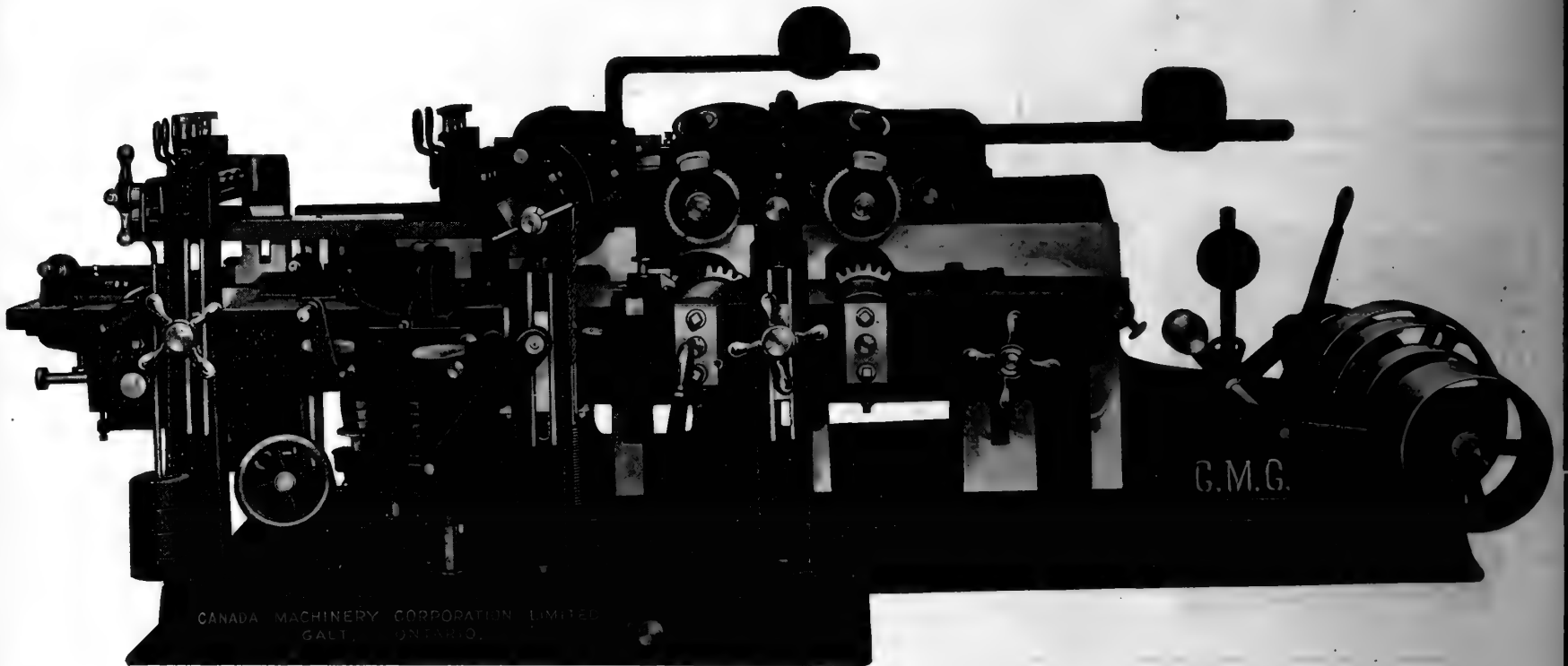
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6 tons capacity.
Boom 65 feet.
Steel Boom and Steel Mast.

12" MOULDER



12" MOULDER



303—Heavy Duty Foursided Moulder.

A heavy substantial moulder suitable for all classes of work.
It is the most convenient moulder to adjust and operate on
the market to-day.

Heavy feed works. Outside top head support.

Increased weight. Long heavy table.

A new Bulletin No. 303 fully describing this moulder has
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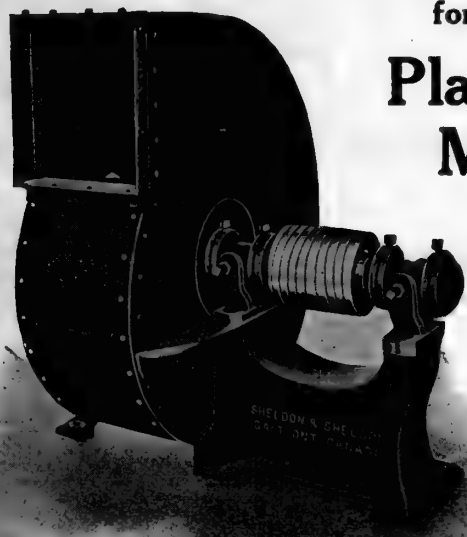
Canada Machinery Corporation, Limited

Galt, Ontario

Largest Builders of Wood-Working Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
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The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

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"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES —taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbings (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIO NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."

Wickes Brothers

410 White Building - SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

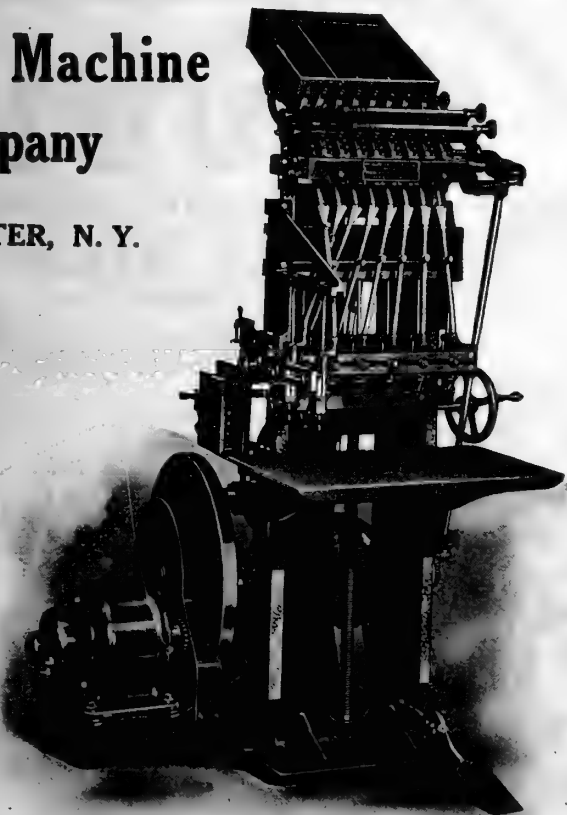
Manufacturers
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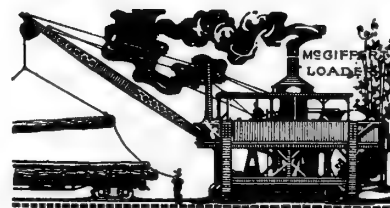
Box Board
Matchers,

Box Board
Printing
Machines.

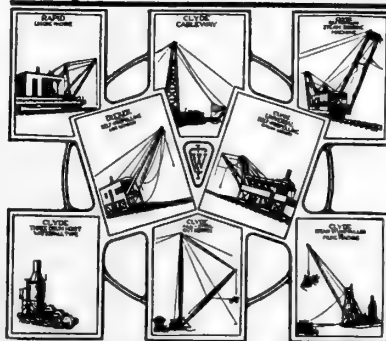


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.

Are your horses of use to you?

This seems an absurd question—and the answer is always
"Of course they are"—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	\$4.50 gal.
1 lb. bottles	8.00 doz.
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Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic	
1 gal. jugs (Imperial) 40 doses	5.00 gal.
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Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
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Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.
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Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.



Good Lumber HORSES

Should be free from all blemishes

Use

ABSORBINE

for Wind Puff
Capped Elbow,
Bog Spavin,
Thoroughpin,
Shoe Boil,
Curb, Enlarged
Glands and all
puffs and swell-
ings, Fistulla,
Poll Evil,
Sprains, Con-
tracted Ten-
dons, Bruises,
Lameness of
all kinds.

ANTISEPTIC

You cannot get good work out of your lumber horses if they are lame, blemished, sore, sick or similarly unfit. The animal with Swellings, Soft Bunches, Bog Spavins or any such blemish, whether lame or not, needs your attention.

ABSORBINE

best friend—it relieves the horse of all pain, soreness and trouble—some blemish. It makes the horse better looking, better working, more fit and of greater value to you. You can work your horse at the same time. This is no new lotion but the tried and tested remedy of many years successful use.

Thousands upon thousands of horses which would have been ailing and sick and unsightly have been made fit and well—good workers and good lookers. What others have done with Absorbine you can do, too. All enquiries on special cases answered without delay—full information and instruction on request. Absorbine \$2.00 a bottle at druggists or delivered.

Manufactured only by

ABSORBINE

does not blister or remove the hair, never leaves scars or blemishes of any kind.

It is easy to apply and does not require the horse to be laid up.

Highly concentrated and only a few drops required at each application.

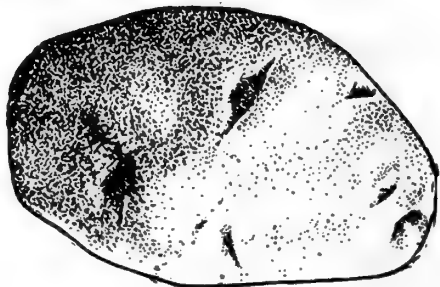
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424 Lyman's Bldg.

MONTREAL, CAN.

Annihilate Scale



Potato Scale will positively remove scale from your boiler tubes and can do no injury to your pipes or fittings. Feed water should be regularly treated with Potato Scale to prevent scale, pitting, grooving and honeycombing; it saves fuel and so treats the water that it absorbs more steam.

Send us a gallon of feed water which we will analyze and then mix a sample of potato scale to suit your conditions—this is a free trial, write us.

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Box 1384

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THE CAPACITY OF YOUR
DRY KILN

GRAND RAPIDS VENEER WORKS.

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MEANS
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A Practical Theory
Competent Engineering
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Years of Experience
Guaranteed Results

Grand Rapids Veneer Works

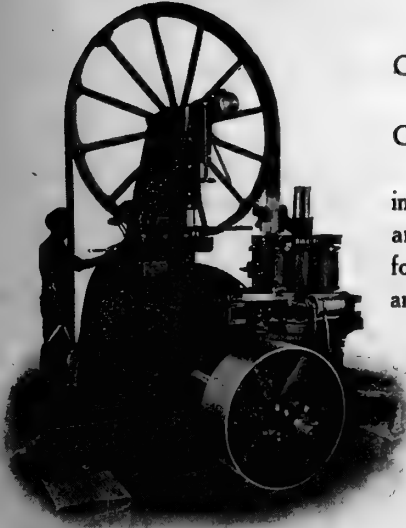
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Michigan



Popular Everywhere

A Specially Not a Line
BAND RESAWS



Saginaw Band Resaw

Geridge, Lonoke County, Ark.,
November 3rd, 1913.

Gentlemen:—

We have now used your Saginaw Band Resaw for one year and have only the highest praise for it. It turns out perfect lumber and were we to purchase another saw, it would give us great pleasure to have you build one for us.

Yours very truly,
Varner Land &
Lumber Co.

Wm. B. Mershon & Company
SAGINAW, MICH.

Provide for the Future **NOW!**

In every lumber manufacturing section of North America are to be found crumbling ruins of mills whose owners elected to depend on the open market for their log supply, who refused to invest their good money in standing timber.

In practically every case the "Open Market" has proven an unreliable source of log supply. Farseeing operators have come in, sized up the supply of timber tributary to certain points and bought the bulk of it. Many of the mill owners who had the first and the best opportunity to purchase, because of their neglect, have been forced out of business and have seen their investment in plant and equipment depreciate to the extreme low limit of its value as junk.

Does that possibility confront you?

If it does, please bear in mind these facts:

Now is the time to provide for your future supply.

We can give you exactly what you need.

Your copy of "Washington Red Cedar, America's Overcoat Wood," Lumber Users Guide No. 12 awaits your request. Send for it.

James D. Lacey & Company
Timber Land Factors

Chicago, Ill., 1750 McCormick Building
Portland, Ore., 1313 Northwestern Bank Bldg.
Seattle, Wash., 1009 White Building

Lumber Camp Ranges and Heaters

Our stoves are specially designed to meet all requirements of camp work.

We know exactly what is necessary and desirable in this class of stove.

We put into all our stoves the best of material and workmanship coupled with the best of expert experience.

The 'Leader Range' for coal and wood, shown in this cut is specially adapted to Lumberman Camps, Boarding Houses, Hotels and Railroad Construction Camp Work. We also make this Range with side hinge doors.

It is large, heavy and strongly built. Has good oven space and large heating surface. When a good, solid, reliable stove is wanted the 'Leader' will give satisfaction.

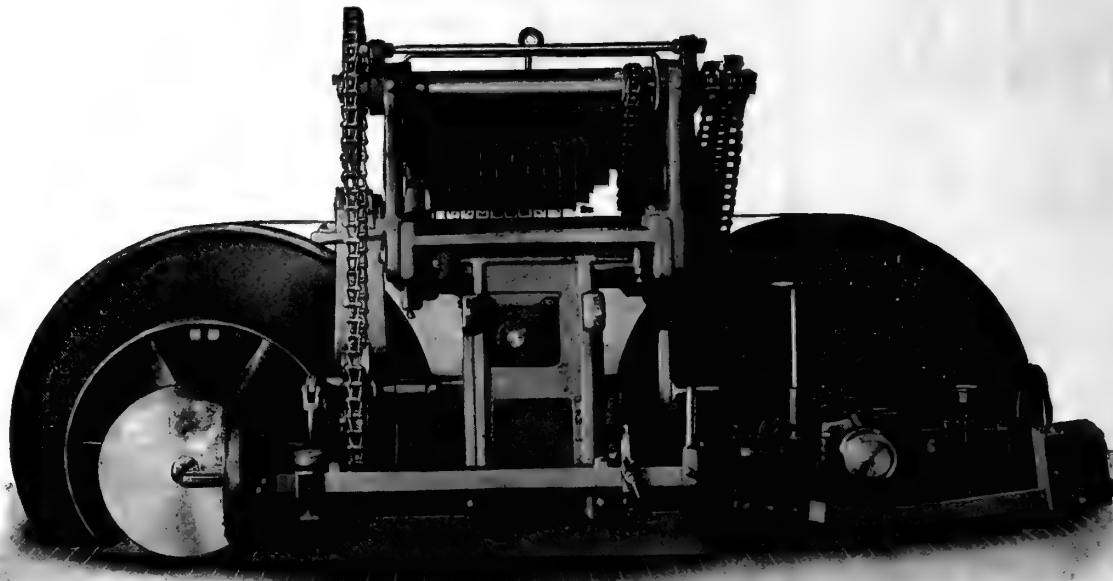
Write for our catalogue.

**All Kinds of Stoves for
Large or Small Camps**



NO. 10-36A SIX HOLE LEADER RANGE AND RESERVOIR

ADAM HALL, Limited - **Peterborough, Ontario**
Manufacturers of Ranges, Heaters, etc., for Lumber Camps, Hotels, and Railway Construction



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

KEEP THE WORK GOING



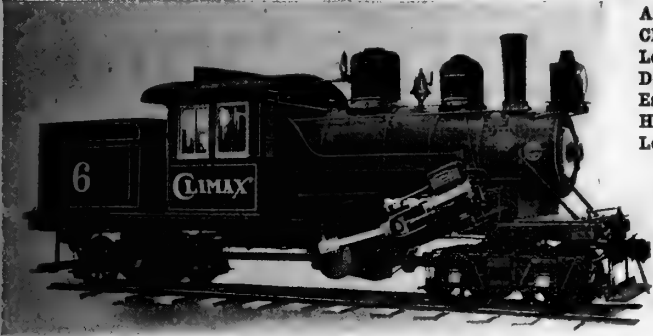
Nothing is more important in logging than the prompt and certain movement of cars.

Delays affect the whole work. To avoid delays, locomotives must be reliable and always ready for service.

Our standard logging locomotives are built to insure reliability and constant service. Only tested materials are used in their construction. All wearing parts are made to templates and gauges. Interchangeability of like parts is guaranteed, and long delays waiting for duplicate parts avoided.

MONTREAL LOCOMOTIVE WORKS, LTD.

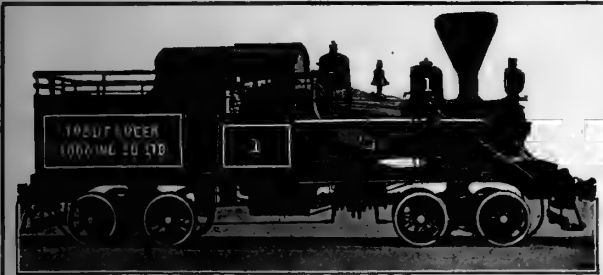
Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**For Logging Operations**

Our Logging and Industrial locomotives are not mere engines from stock, but specially designed locomotives for logging use. They operate with a minimum of fuel consumption and can be relied upon to give steady service every day of the year. All parts are amply designed, lessening the possibility of breakage. Send for Specifications.

We are also builders of Stationary Boilers, suitable for Contractors and Industrial Plants.

Canadian Locomotive Company, Limited, Kingston, Ont.

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

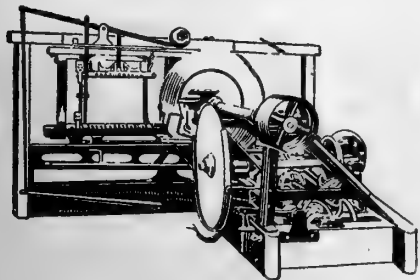
Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

16,000 to 45,000 good shingles per day of ten hours. YES, that's what ONE MAN WILL joint and sort when operating our

GENUINE "Dunbar" Shingle Machine



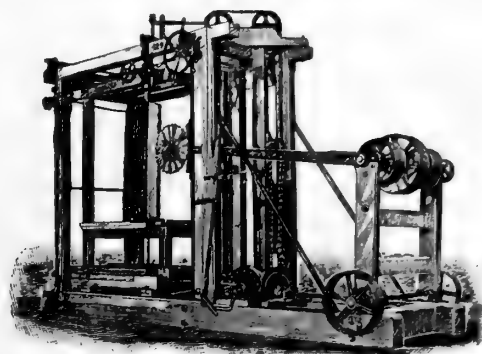
We are Pioneers in this line of work in the Dominion, and the "Genuine Dunbar" is manufactured only by us.

Write us for particulars of this, and also when in need of lumbering machinery and supplies.

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson Mfg. Co.

Fredericton, N. B.



"Dunbar" Clapboard Machine

Here is a machine that will make clapboards out of lumber that cannot be profitably manufactured into anything else. It is guaranteed to take from 15% to 20% more out of the same lumber than the old style machine. Capacity from 5000 to 7000 per day according to quality of lumber.

It will pay you to get our particulars

Maritime Foundry & Machine Wks.

Limited

Chatham,

New Brunswick

THE PETER GERLACH CO.
MANUFACTURERS
AND BUILDERS OF

SAWS
CIRCULAR AND CYLINDER
MACHINERY
STAVE HEADING AND BARREL
TOOLS
SAW AND LOGGING

For the Manufacture of the following

STAVES	HEADING
BARRELS	KEGS
COOPERAGE	WOODEN WARE
HOOPS	HANDLES
PAIS	TUBS
CHURNS	FREEZERS
CANDY PAIS	FISH KITS
BOX BOARDS	BOTTOMS
CHAIR STOCK	SHINGLES
CLOTHES PINS	LUMBER

COMPLETE PLANTS

FOR THE MANUFACTURE OF

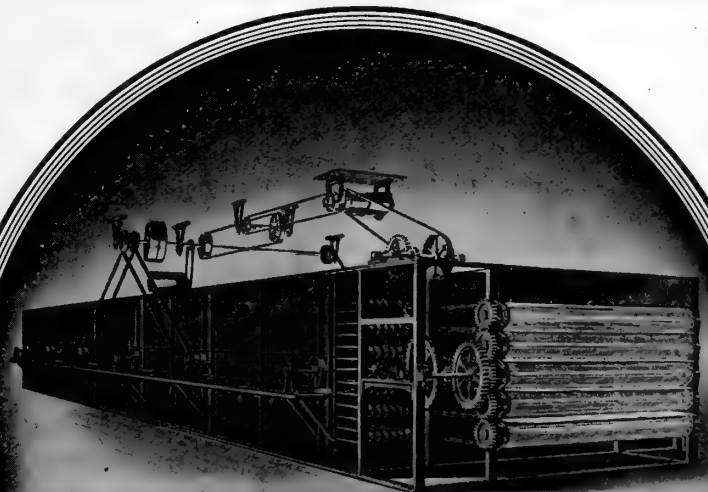
BARRELS, KEGS, STAVES AND HEADING
OUR SPECIALTY

FOR PRICES AND FURTHER PARTICULARS,

ADDRESS

THE PETER GERLACH CO. CLEVELAND, O. U.S.A.

"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the "Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

Send for Bulletin No. 4

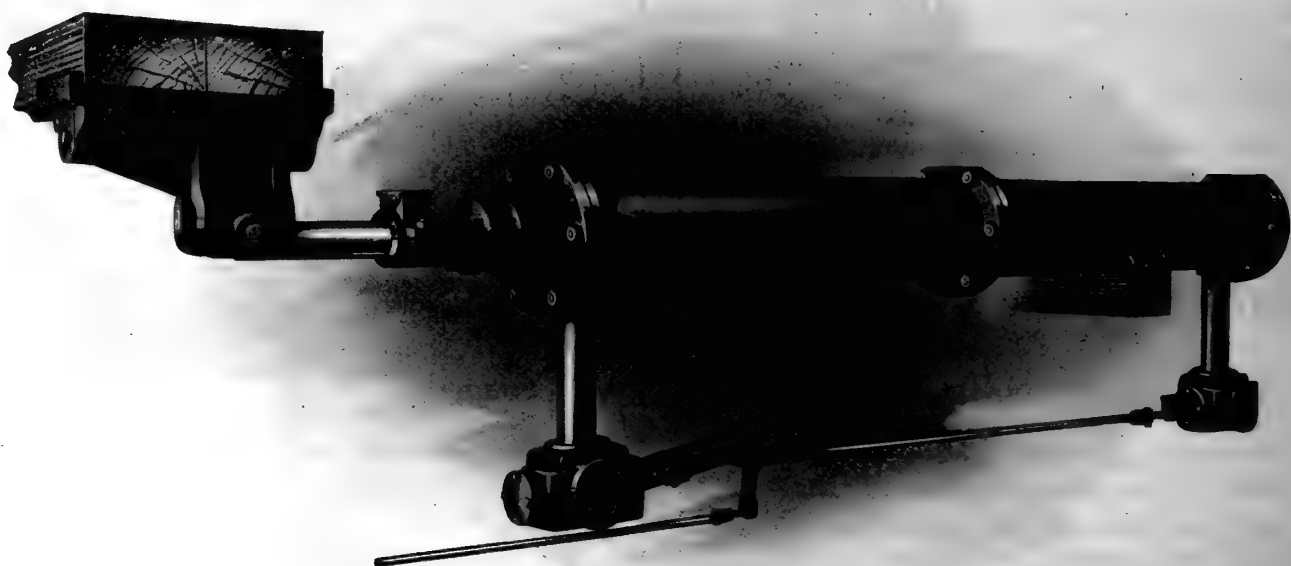
THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.

The Mark



of Quality

Cut Your Cutting Cost



DIRECT ACTING STEAM FEED
WITH MODEL "D" VALVES

A STEAM FEED, especially when fitted with our model "D" valves, is such a great time saver over a friction feed that it will make an enormous increase in your lumber production, with no additional labor.

Do not decide that your boiler capacity is too small until you have consulted our engineering department. The power required by our feeds is surprisingly small, and we will *guarantee results* on any installation.

We make these feeds in all sizes, including one for *your* requirements.

SHALL WE SEND OUR BULLETIN? IT'S WORTH WHILE.

The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver
Gorman, Clancey & Grindley, Calgary and Edmonton

Represented by:

Stuart Machinery Co., Ltd., Winnipeg
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Waterous Boilers

Are Best For Sawmill Use

To get the full steam value out of the fuel you burn install Waterous Return Tubular Boilers. It will pay you for these reasons:—

They are economical of fuel—they carry plenty of steam in reserve for use in emergencies—they can be used with hard and dirty water—they are easily cleaned and readily taken care of.

Furthermore, we build various styles of boiler settings that are dimensioned and designed to best handle the various fuels used in the sawmill. Whatever kind you use, we will install your boiler to give you the highest possible efficiency and most perfect combustion with it.

We build and carry in stock Return Tubular Boilers up to 72" x 18'. If we cannot supply you at once from our yards we can turn out your order in quick time. Ask us for prices on the next boiler you buy.

We build complete Power Plant Equipment for every size installation—Catalogues and Prices on request

The Waterous Engine Works Co.

Brantford, Canada

Limited

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Some Recent Installations

Canadian Pacific Railway, Calgary, Alta.	2—60" x 14'
Okanagan Sawmills, Enderby, B.C.	2—66" x 14'
Lake Superior Iron and Steel Co., Sault Ste. Marie	5—72" x 18'
Corporation of Orangeville	1—54" x 14'
Dominion Cannery, Simcoe	3—72" x 18'
Grand Trunk R. R., Montreal	2—72" x 18'
Steel Company, Limited, Hamilton	2—72" x 18'
Dunlop Tire & Rubber Goods Co., Toronto	1—72" x 18'
Imperial Oil Co., Limited, Sarnia	5—72" x 18'
Canadian Westinghouse Company, Hamilton	2—48" x 14'
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"FROST KING" METAL

\$5,000,000.00
worth of mixed metal
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Our thirty five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

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HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

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Staved Columns
Veneered Doors
Newel Posts
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Trim
Pine Doors and
Frames
Turned Newel Posts and
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MANUFACTURERS
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THE
LEATHER
BELT
THAT'S
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OUR
"EXTRA"



MONTREAL
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Limited
General Mill Supplies MONTREAL



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"INGLIS" boilers are the product of over 50 years' experience and study combined with the most modern equipment for boiler making.

"INGLIS" boilers are made in every type and all sizes.

Let us quote on your requirements.

The John Inglis Co., Ltd.
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Montreal Representative—A. Angstrom,
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Canada Lumberman

Time is Money

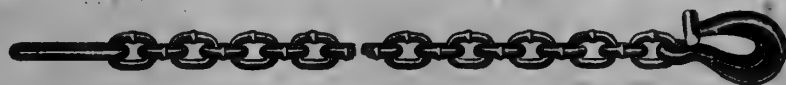
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Files Branded
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are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



Electric-Welded Boom Chain

25% {More Weld} = 25% {More Strength} = 25% {More Wear}

Sheared Toggle and Ring * T Bar Hook and Link * Two Sheared Toggles * Forged Toggle and Ring

Made in Canada

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Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.



UNHARMED BY WATER, STEAM OR CHANGE OF TEMPERATURE

Dick's Belts are guaranteed to run through water, or steam, if necessary, without injury and to be unaffected by changes in temperature. They have been applied with signal success to every variety of work for which belts are used. Saw Mill owners find Dick's Balata Belting the cheapest when length and quality of service are considered. Catalog No. 17 on Transmission Appliances tells all about it.

DICK'S Balata Belting Leather Belting Wood Split Pulleys Shafting Hangers Iron Pulleys
Steel Pulleys Saw Mill Supplies Clutches Babbitt Wood-Working Machinery Steam Goods

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Fairbanks Scales
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Fairbanks-Morse Gas Engines
St. John, N.B. Winnipeg

Safes and Vaults
Calgary Vancouver

UNLINED LINEN FIRE HOSE (Circular Woven and Seamless)

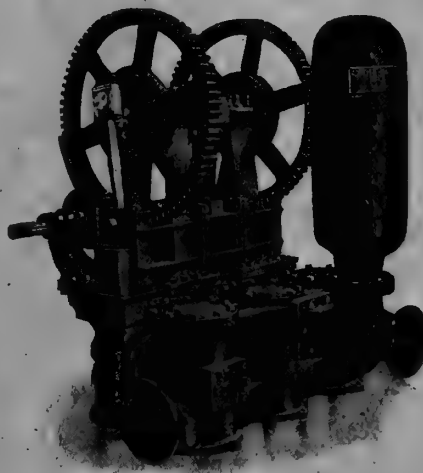
"Underwriters Best" Red and Blue Stripe

MADE to conform to the requirements of the Associated Factory Fire Insurance Companies and is approved and accepted under every high-grade flax-hose specification.

GUARANTEED WATER-PRESSURE 500 LBS. PER SQUARE INCH

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER

F. REDDAWAY & CO., MONTREAL, Sole Makers of



OUR first aim is to please our customers. Why not give us a trial when next in the market for Pumping Machinery?

The Smart-Turner Machine Co.

Limited

Hamilton - Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

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MONTREAL

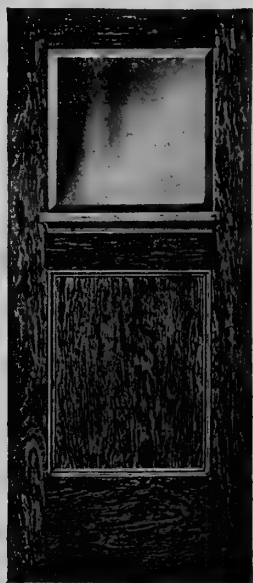
Midland Planing Mill Products

THE LEADING STOCK LINES

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition? The up-to-date dealer who carries a stock of Hardwood Veneered Front Doors, wants the widest possible range of designs, but is always hampered for room.

Here are three designs of Veneered Doors and four designs of Midland Interchangeable Sash.



Door No. 612



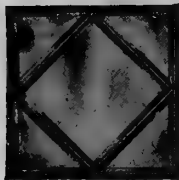
Sash A



Door No. 79



Sash C



Sash B



Sash D

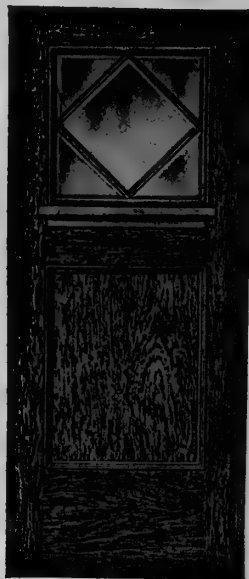


Door No. 61

These doors and sash are all you require to carry. Each door will make up into five different designs. The sash are easily fitted, just as easy as a pane of glass, and are **interchangeable**. The same piece will fit each of the different designs. You will require additional sets for each additional sized door you carry in stock.

See our new door catalogue "Midland Doors" for full information and prices.

→
And
this
is
what
they
look
like.
→



Door No. 613



Door No. 615



Door No. 82



Door No. 83

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition?

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company

CACHE BAY Limited **ONTARIO**

Manufacturers of

**Lumber, Lath and
Dimension Timber
Planing Mill
Dry Kiln**

FOR SALE

All Dry Stock

1	Car	5/4 x 4 & up x 6/11	Shipping	Cull	White	Pine
2	"	5/4 x 4 x 10/16	"	"	"	"
2	"	5/4 x 5 x 10/16	"	"	"	"
4	"	5/4 x 6 x 10/16	"	"	"	"
4	"	5/4 x 7 x 10/16	"	"	"	"
2	"	5/4 x 8 x 12/16	"	"	"	"
1	"	6/4 x 4/7 x 10/16	"	"	"	"
4	"	6/4 x 8 x 12/16	"	"	"	"
4	"	2 x 4/7 x 12/16	"	"	"	"
4	"	2 x 8 x 12/16	"	"	"	"
1	"	5/4 x 8 & up x 10/16		Box	White	Pine
1	"	2 x 12 x 10/16		Mill	Cull	White
2	"	6/4 x 6 & up x 12/16	No. 1, 2 & 3	Cuts	White	Pine

WRITE FOR PRICES

The Colonial Lumber Co., Ltd.

Pembroke, Ontario



Don't Fear The Bear

With

Hocken's Hemlock

You can compete with the best.

Hocken Lumber Company, Limited

Otter Lake Station, Ont.

Write for Prices

On the following Stock

10 Cars	1 x 4 & 5	No. 1 Spruce Dressed 2 S & C.M.
300,000	2 x 4	" 10/16 piled separately
100,000	1 x 4	C. & B. Red Pine Strips.
50,000	1 x 3	" White "

In Transit

5 Cars B. & B. Steam Dried Short Leaf Yellow Pine Finish.
1 x 6 to 12" equal proportions of each width.
5 Cars 3 X B. C. Shingles A. Cotton Brand.

The Long Lumber Co.

Hamilton, Ont.

Canada Lumber Sales Co., Limited

want to buy

BASSWOOD

20 cars 4/4" x 3" and up random length
8 " 5/4" x 6" " "
8 " 6/4" x 6" " " random length
winter sawn, white stock. Delivery May
and June. We are also open to buy
Hemlock and Spruce boards—any quantity.

145 St. James Street - Montreal

Yellow Pine Timber

And Lumber Rough or Dressed
Car Material and Long Timbers
a Specialty

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and

Cincinnati,
Ohio



Spruce
White Pine
Banksian Pine
Birch



Get our stock list and prices.

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President

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Established
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**Georgian Bay
Lumber Co.**

Limited

Waubashene, Ontario

Manufacturers of High Grade

**Lumber
and Laths**

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Mills at Deschenes, Que., near Ottawa

**White Pine
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Spruce
Lumber and Lath**

Office, **Castle Building**
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DETROIT, MICH.

"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow
Pine, in the Rough
Cedar Telegraph and Electric Railway Poles 20 to 80 ft.

Write for prices

Timber for R. R. Construction and
Commercial Purposes, a Specialty.

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Phone Cadillac 2275

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Manufacturers of **YELLOW PINE LUMBER**

Mills:—

Selma, La.
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Long Leaf Timbers,
Short Leaf Finish
and
Railroad Material

Send your inquiries and orders to:—

General Sales Office

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Spruce and Hemlock

Lumber

***Cedar Shingles
Lath***

BARTRAM BROTHERS

Limited

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Bromley can submit attractive prices.

Real choice red and white pine stock.

Odd lots go at bargain prices.

Mississauga reserve timber—my stock.

Largest orders filled promptly.

Every board carefully graded.

You should get my wholesale prices.

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Bromley
Pembroke
Ontario
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MANUFACTURERS AND WHOLESALERS OF

White Pine, Birch, Spruce and Hemlock

Special price for quick shipments:

6/4-8/4-10/4 No. 1 Com & Btr. Birch
1 in. & 2 in. Merchantable Spruce
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1 in. Crating Lumber
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**1913 Sawing
SPRUCE**

Dry Factory White Pine—All thicknesses.

Nice Line 1 x 4 and up—6/11 Moulding White Pine.

I WANT YOUR ORDERS

and solicit your inquiries for

**PINE, SPRUCE, HEMLOCK,
HARDWOODS, LATH**

Deal with me and you will be satisfied every time.

C. A. SPENCER

*Wholesale Dealer in Rough and
Dressed Lumber, Lath
and Shingles*

Eastern Townships Bank Building, MONTREAL, Quebec

Hemlock, Pine and Spruce Bills

cut to order.

We have a good stock of White Pine, Red Pine, Jack Pine, Spruce and Hemlock.

Planing mill in connection with sawmill at Fesserton.

Fesserton Timber Company, Limited

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Limited

SUDBURY, ONT.

Manufacturers of

**Lumber and Lath,
Planing Mill Work**

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Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

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Fraser Limited

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Spruce Lumber

Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**

J. B. SNOWBALL CO., LTD.

Chatham, New Brunswick, Canada



View of yard and mill—J. B. Snowball Co., Ltd., Chatham, N.B.

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**Spruce, Pine, Hemlock, Hardwood, Lumber,
Cedar Shingles and Laths**

Mills—Chatham, Tracadie, Millerton.

We solicit your enquiries.

We invite correspondence re
**“Dalhousie” Brand
N. B. Cedar Shingles** *of all grades*

Special Prices for shipment to
All Ontario Points

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Agents for Ontario **R. Laidlaw Lumber Co., Limited**
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Head Office, St. John, N.B.

Mills: St. John, N.B.

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Manufacturers of

**Bleached
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a classified advertisement in the **Canada Lumberman and Woodworker** will find one for you.

If You are a Capable Man

no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.

The rates are most reasonable, write us.

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President Managing-Director

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Co. Limited**

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13 Foot and 16 Foot

**Lath and
White Cedar Shingles**

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JOHN P. NEWMAN

Saw Mill and Novelty Works. All
kinds of Hard and Softwood Lumber.
Dimension Stock in Beech, Maple and
Birch. Mattress and Cot Frames, Etc.
Send me your requirements, I can furnish
you stock that will please.

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LUMBER AND TIMBER

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Oak Mouldings, Doors, Sashes and
Blinds, Cedar Poles and Ties.

Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
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Hardwood Flooring

The Celebrated Diamond Brand

End Matched, Bored,
Polished and Bundled

Manufactured by
SIEMON BROS., LTD.

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Portable
CLOCKS**

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Lumber

**Good
Grades**

**Right
Prices**

**Prompt
Shipments**

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10 Cars 4/4 No. 1, C. & B. BIRCH

1 " 6/4 No. 1 " "

4 " 8/4 No. 1 " "

3 " 16/4 1st and 2nd "

15 M ft. 8/4 No. 1, C. & B. S. ELM

1 M ft. 12/4 No. 1 " "

6 M ft. 16/4 No. 1 " "

7 M ft. 6/4 No. 2 " BEECH

1 1/2 M ft. 5/4 No. 2 " "

3 M ft. 10/4 No. 1 " "

7 M ft. 12/4 No. 2 " "

Ask About Car 10/4 to 16/4 BIRCH

FULL LINE OF JACK PINE

Above stock dry and well manufactured

**C. G. Anderson Lumber
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Manufacturers and Strictly Wholesale
Dealers in Lumber

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WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

**AUGER & SON
QUEBEC**

**The Canada Wood
Specialty Co., Limited**

Manufacturers:

Lumber, Hardwood Flooring,
Handles, Poles, Bed Frame
Stock, Cheese Box Hoops,
Heading, Baskets, Etc.

Write, Telegraph or Telephone
your orders

Orillia, Ont.

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LUMBER CO.**

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For Immediate Shipment

Hardwood Lumber

**Moulding, Sash and
Doors**

SPECIALTY: Dressing of wood
in transit on the Intercolonial
Railway.

The Rimouski Industrial Co., Ltd.
Rimouski, P.Q.

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N. Y.

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The experienced individual gives close attention, knowledge and aggressive interest. He will render you better and cheaper service than the hastily built force of a corporation. Each of my men has learned in the hard school of long actual experience. Try me.

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WASTE ELIMINATION IN LOGGING OPERATIONS

My reports show where the waste is, and how it may be eliminated.

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Carolina Pine

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in any region—
at any time—
at reasonable prices.

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A. MILLER Dealer in All Kinds of Hardwood Lumber

Office and Yard:
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The Penetanguishene Planing Mill Sash and Door Factory

Planing of all kinds done by carload. Railroad Switch in connection with mill. All classes of building material, lime and cement for sale.

ALPHONSE TESSIER, Builder & Contractor
PENETANGUISHENE, ONTARIO

"Well Bought is Half Sold"

Let us quote you on the following Specials:

10,000 Ft.	4/4	1st and 2nd Basswood
100,000 "	5/4	" " "
40,000 "	6/4	" " "
2,500 "	8/4	" " "
2,500 "	16/4	" " "
100,000 "	5/4	No. 1, 2 and 3 Common
11,000 "	6/4	1st and 2nd Brown Ash
2,000 "	16/4	" " " "
12,000 "	8/4	" " Soft Elm
1 Car	4/4	No. 2 C. & B. Brown Ash
48,000 "	4/4	No. 1 " Soft Elm
22,000 "	8/4	No. 1 " " "

F.O.B. 8c rate to Toronto.
Good Average Width and Dry.

—ALSO—

10 Cars 1 3/8—4 Ft. M. R. Pine Lath
F.O.B. 11c rate to Toronto

Thoroughly dry. Must be moved promptly.

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine and Hemlock Lumber

1026-32 Traders Bank Bldg, Toronto, Ont.

Mills: Byng Inlet, Ont.

We are Buyers of

Hardwood Lumber

Pine and Spruce
Veneers Handles
(3 or more ply) (all descriptions)

Staves Hoops Headings

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Write us for particulars
and prices

Superior Mfg. Co., Ltd.
93 Church St., Toronto

For Sale by Owners B. C. Timber Lands

Located on { G. T. P.
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Saw Mill Help

Competent employees for saw mills and woodworking plants are scarce. The best of them read this paper regularly. To get in touch with good men send a "Want Ad" to the

**Canada Lumberman
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Specialty --- Dimension Timber

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Lath
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NORTH PACIFIC LUMBER CO., Limited
MILLS AT - - BARNET, B.C.TIES
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**THE MCGIBBON LUMBER CO.
OF PENETANGUISHENE**

Manufacturers of and Dealers in

Lumber, Lath, Shingles, Etc.HEMLOCK BILLSTUFF a Specialty of which we have
the Best Assortment on Georgian Bay.

Don't wait to write. Phone us your requirements.

All stock sized or matched if required.

Our Yards are Unequalled for Drying Lumber

**LOGGING - DRIVING
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Which is the most expensive operation?

In which is there the greatest need for improvement?

Why not improve it?

The Shaw Motor-Headworks is the
latest improvement in Log Driving
Machinery.

Operated by one man.

Will tow 2,000,000 feet.

Is quick, light and reliable.

*For further particulars write***RUSSEL BROTHERS**

Fort Frances, Ontario, Can.

**California White Pine
California Sugar Pine
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Best Stock for Factory and Pattern Lumber

Ask **LOUIS WUICHET**

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The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

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Mills at Victoria Harbor, Ont.

HEAD OFFICE,
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Highest Grade

Extra Clear XXX

B. C. Red Cedar Shingles

in Transit

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Spruce { 1 x 4-5-6-8 Dressed or Rough
2 x 8-2 x 10

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White Pine { 1 x 4 and wider Mill Culls
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Always on hand a full line of Spruce and
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Wanted 1 in. and 2 in. Hemlock and Spruce.
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2 x 4," 10, 12, 14 and 16' each length piled separately

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Mixed Cars

Promptly Shipped

SEND US A LIST OF YOUR REQUIREMENTS AND
WE WILL QUOTE AN ATTRACTIVE PRICE.

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☐ You can get the man you want
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Montreal Office: 119 Board of Trade Bldg.

For Quick Sale 1913
Summer Cut

1 x 4, 5 and 7, 10/16 ft. Mill Run Norway, 44%	Feet.
4-in., 41% 5-in., 15% 7-in.	150,000
1 x 6, 10/16 ft. Mill Run Norway	150,000
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5/4 x 4 and up, 10/16 ft. Mill Run Norway.	15,000
6/4 x 4 and up, 10/16 ft. Mill Run Norway.	14,500
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18 Toronto Street, TORONTO, ONT.

Our Mills now ready to cut

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up to 12 x 12 — 24

We have on hand a full line of

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Cut This Season

Prompt Delivery guaranteed.

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A Typical Logging Scene in Fasset, Que.

When You Want Lumber From Such Logs

as these, we have the stock ready for you. Quality and service is the keynote of our success and by devoting our energy to the selling of Soft and Hardwoods we are able to give you attention that insures the acme of satisfaction. We are open to contract for our

Hardwoods and Soft Woods

and can handle any contract for Special Bills.

Our new mill commenced operating in January, and is now running double tower.

Fasset Lumber Company, Limited
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River Ouelle Pulp & Lumber Co.

Manufacturers of

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Mills at:

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It will pay you better than making them yourself.

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Car and C rigo lots only

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Large stock of 1" 1¼", 1½" and 2" WHITE
PINE, Bone dry.

10/13-ft. Spruce and Hemlock

Offices at
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Mills at
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Timbers
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and
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Limited

Head Office: JAFFRAY, B.C.

Mills at: CRANBROOK, B.C., RYAN, B.C., JAFFRAY, B.C.



Heavy Fir Dimension

Is Our Particular Specialty

The Heavier it is the Better we like it

**We Dress from 1 to 4 Sides up to
16-in. x 20-in., 60-ft.**

Our grade is positively right, and prices will please

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Mills at Craigs on the B.C.E.R.

Shipment by C.P.R.R., G.N.R.R. or B.C.E.R.R.

Are You Interested in British Colum- bia Trade?

The immensity
of the Lumber
Industry will
within a few
years make
this Province
the most im-
portant in the
whole Domin-
ion.



There is un-
doubtedly a big
market for Mill
Equipment of
all kinds. Let
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we can please
you.

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Lumberman**

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VANCOUVER, B. C.
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Head Office: Revelstoke, B.C.

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Lumber, Lath and Shingles

Specialties: WHITE PINE, WESTERN SOFT PINE and CLEAR CEDAR PRODUCTS

Special facilities for supplying the Eastern Trade

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Send you a trial order of

White and Norway Pine

OUR SPECIALTIES:

Laths, Boxes, Wooden Pails,
Box Shooks, Tubs.

We can do dressing, matching and re-sawing. Place your orders this way and save freight.

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Right Footwear for Lumbermen and Sawmill Workers.

Ordinary boots or shoes are useless where there is much dampness or wet. For thirty years we have been making our celebrated oil-tanned waterproof footwear from the finest leather procurable, tanned by our own secret process and known as Skowhegan Leather.

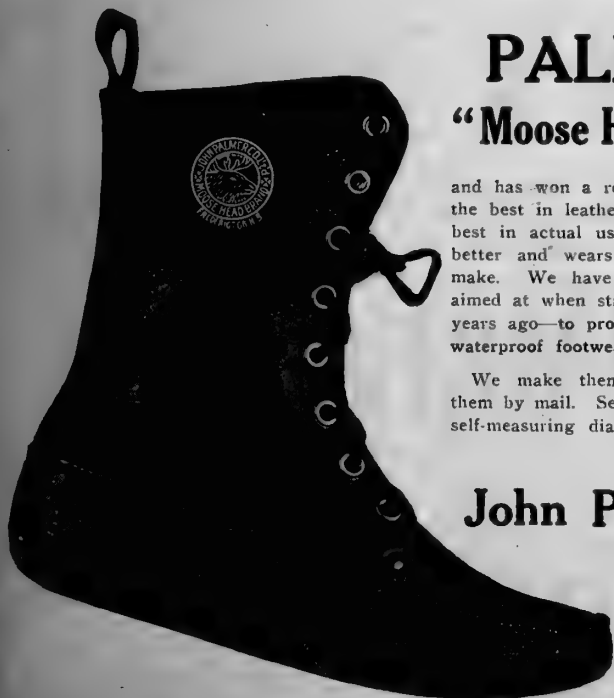
This footwear has been sold under the name of

PALMER'S "Moose Head Brand"

and has won a reputation. It represents the best in leather, best in workmanship, best in actual use. It fits better, looks better and wears better than any other make. We have reached the mark we aimed at when starting in business thirty years ago—to produce the best oil-tanned waterproof footwear in the world.

We make them to measure and sell them by mail. Send for free booklet with self-measuring diagram to-day.

John Palmer Co.
Limited
Fredericton
N. B.



Machinery and Timber For Sale

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |

POWER PLANT

- | |
|---|
| 2 Double Duplex, high pressure Water Pumps. |
| 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam. |
| 2 125 h.p. Water Wheels. |
| 1 Upright Engine for sawdust conveyor. |
| 1 10 h.p. Engine. |
| 1 Mitts & Merrell Hog. |
| 1 Wood Machine for 22-in. wood. |
| 1 Wood Machine for 16-in. wood. |
| 1 Edger for ripping dry lumber, installed. |
| 1 Edger for ripping dry lumber, not installed. |
| 1 30 h.p. Generator, 250 volt. |
| 1 30 light arc generator. |

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

Also, contents of machine shop, containing Planer, Drill, Lathe and Machinery, with tools necessary for repair work.

All of the above open for inspection at Parry Sound.

FILING ROOM

- | |
|--|
| 1 Automatic Filing Machine for 12-in. D.C. band saws. |
| 1 Automatic Grinding Machine for 8-in. S.C. band saws. |

The
Parry Sound Lumber Co.
Limited
26 Ernest Avenue, TORONTO, CANADA

HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK
POPLAR ASH

Yards at Nashville, Tenn.

We can ship you promptly any of the above
Stock, Carefully Inspected
WE WOULD LIKE TO HEAR FROM YOU

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Manufacturers of Hardwoods—Any Thickness From

1/30" SLICE CUT VENEER

1/20" SAWED VENEER

to

2" BAND SAWED LUMBER

Specialty:

QUARTERED WHITE OAK

Service First

We've got what you want
When you want it.

20,000,000 feet Dry Hardwoods for immediate
Shipment.

Any thickness Any grade Any width or length

Hardwood Specialists

Planing Mill Work. Dimension Stock.
Kiln Drying.

The Stearns Salt & Lumber Co.

Ludington, Michigan

W.M. RITTER LUMBER COMPANY

Below is a list of Dry Lumber
which we can Ship Promptly

POPLAR

1 car 5/8, 24 to 27, Poplar
panel and No. 1.
4 cars 4/4 1s and 2s, 7-17.
1 car 8/4 1s and 2s.
2 cars 4/4 No. 1 Common.
3 cars 5/4.
1 car 6/4.

1 car 6/4 1s and 2s.
1 car 8/4 1s and 2s.
5 cars No. 1 Common.

WHITE OAK

1 car 5/4 1s and 2s.
2 cars 6/4 1s and 2s.
2 cars 7/4 1s and 2s.
10 cars 4/4 No. 1 Com.
2 cars 5/4 No. 1 Com.
2 cars 6/4 No. 1 Com.
3 cars 7/4 No. 1 Com.

RED OAK

2 cars 4/4 1s and 2s.
1 car 5/4 1s and 2s.

The above is a list of Dry Lumber which we can
ship promptly.

All our own manufacture, band sawed, and thor-
oughly seasoned. Do not place your order before
writing for prices.

Canadian Representative:

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Phone Parkdale 3222

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MANUFACTURERS OF BAND-SAWED

OLD-FASHIONED SOFT

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ASHLAND,

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HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

THE W. E. HEYSER LUMBER COMPANY

Manufacturers, Wholesalers and Exporters of High Grade

West Virginia and Southern Hardwoods

15,000,000 ft. on hand at all times of dry Plain & Quartered W. and Red Oak, Poplar, Ash, Hickory, Gum and other Hardwoods.

Quick shipments direct from our own mills and yards.

Main Office and Yards, Cincinnati, Ohio.

Write for prices.

Sell Hardwoods in Canada

Reach the furniture factories, piano factories, sash and door factories through Canada's National lumber medium.

Published semi-monthly. Write to-day for rates.

Canada Lumberman and Woodworker
Toronto, Canada

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HARDWOOD LUMBER

Wholesale Distributing Yards and
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JAMESTOWN, N.Y.

Mills at—

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Full assortment of grades and thicknesses in Quartered and Plain Oak, Gum, Poplar and other Hardwoods in our Jamestown yards.

STRAIGHT OR MIXED CARS.

IMMEDIATE SHIPMENTS.

See Us First

Now that spring has arrived, do not forget when buying, that we have
a full assortment of

White Pine, Norway & Spruce

JAMES G. CANE & CO.

411 McKinnon Building, TORONTO, Ont.

Wire Rope

Special Alligator Ropes

with proper attachments.

Saw Carriage Ropes

Haulage Ropes

Smoke Stack Stays, etc., etc.

Wire Rope Fittings

Wire Rope Grease

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Hamilton, Ont.

Montreal, Que.

James R. Cameron, M. E., Manager.

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HARDWOOD LUMBER MANUFACTURERS

Mills and Office: MACON, GEORGIA

SHIPPING DRY STOCK LIST

QUARTERED RED GUM	
4/4 No. 1 Common	190,000
4/4 FAS Figured	25,000
4/4 No. 1 Common Figured	35,000

PLAIN RED GUM	
5/8-in. FAS	7,500
4/4-in. FAS	420,000
5/4-in. FAS	20,000
8/4-in. FAS	13,000
4/4-in. No. 1 Common	505,000
5/4-in. No. 1 Common	33,000
6/4 No. 1 Common	16,000

SAP GUM	
3/4-in. FAS	11,000
4/4-in. FAS	75,000
5/4-in. FAS	15,000
6/4-in. FAS	30,000
8/4-in. FAS	14,000

4/4 Wide Panels 18-in. and up	15,000
4/4 Box Boards, 13-in. to 17-in.	13,000

3/4-in. No. 1 Common	14,000
4/4-in. No. 1 Common	60,000
5/4-in. No. 1 Common	15,000
6/4-in. No. 1 Common	60,000
8/4-in. No. 1 Common	15,000
3/4-in. No. 2 Common	18,000
4/4-in. No. 2 Common	544,000
5/4-in. No. 2 Common	9,000
6/4-in. No. 2 Common	7,000
4/4-in. No. 3 Common	300,000

BLACK GUM	
6/4 Log Run	35,000
7/4 Log Run	10,000

TUPELO	
4/4 No. 1 Common and Better	18,000
ELM	
6/4 Log Run	50,000
6/4 No. 2 Common	15,000

CYPRESS	
4/4 Log Run	23,000
6/4 No. 1 Common	5,000
8/4 No. 1 Common	10,000

PERSIMMON	
6/4 Log Run	12,000

MAPLE	
4/4 Log Run	42,000

BEECH	
4/4 Log Run	34,000

SYCAMORE	
4/4 No. 1 Common Quartered	5,000
4/4 Log Run	50,000

ASH	
4/4 No. 1 Common	10,000
5/4 No. 2 Common	13,000
6/4 No. 2 Common	24,000

OAK	
4/4 No. 1 Common Quartered	21,000
4/4 FAS Plain White Oak	5,000
3/4 FAS Plain White Oak	2,900
5/4 Log Run Plain White Oak	6,000
6/4 Log Run Plain White Oak	6,000
8/4 Log Run Plain White Oak	5,000
4/4 No. 1 Common Plain White Oak	110,000
4/4 No. 2 Common Red and White Oak	92,000
4/4 FAS Plain Red Oak	24,000
4/4 No. 1 Common Plain Red Oak	51,000
4/4 No. 3 Common Red and White Oak	35,000
4/4 No. 1 Common Quartered Red Oak	11,000

Ready for Prompt Shipment

Radcliff Saws

A new line of "Made in Canada" saws which has established and is maintaining a high standard of manufacture not excelled in the world of saws.

On a policy of uncompromising, unchangeable quality we offer to the lumbermen and other saw users a product of the very highest order.

Our repair facilities for every kind of saw are complete and our work thorough and permanent. Send for our catalogue.

Radcliff Saw Mfg.

Company, Limited

TORONTO

**CHAIN BLOCKS
IN STOCK NOW,
1/4 TO 30 TONS,
AND ANY LIFT.**

THE HERBERT MORRIS CRANE & HOIST CO.

LIMITED,

EMPRESS WORKS,
PETER STREET,
TORONTO, ONT.

BRANCH OFFICE,
CORISTINE BLDG.,
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Fourdrinier Wires and Cylinder Covers

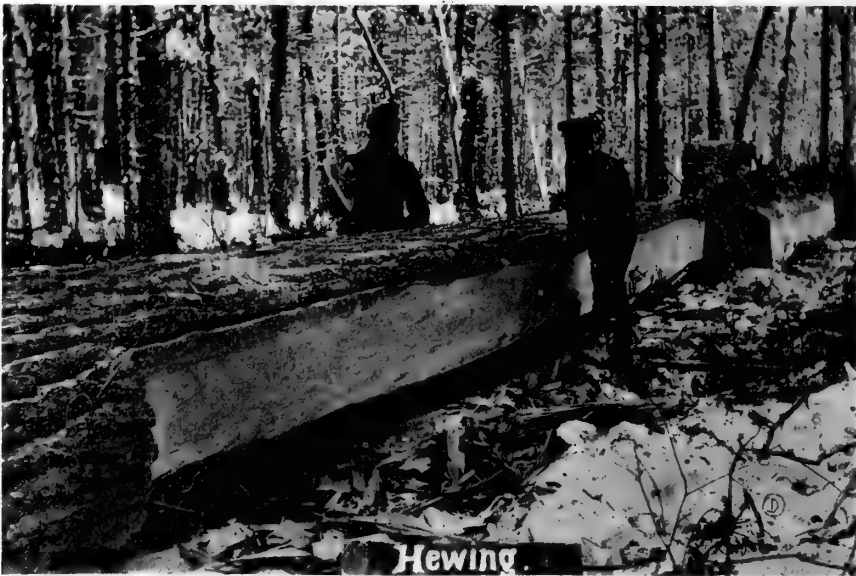
Manufactured in Ottawa by the

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*Dandy Rolls and Cylinder Moulds Limited
Repaired and Recovered*

ONTARIO

Canada's Banner Province



Ontario's timber production last year valued at \$26,774,937 or 40% of Canada's total output.

Pine production, 354,260,008 ft. B.M.

Pulpwood, 131,434 cords.

Railway Ties, 5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.

For maps and full information regarding Ontario, apply to

HON. W. H. HEARST,

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All kinds of
overhead
cranes for
hand power
or electric
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Iron founders, crane makers, machinists

Hepburn Cranes and Derricks



Illustration of
**Electric
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6 tons capacity.
Boom 65 feet.
Steel Boom and
Steel Mast.

Are You Turning Variety Wood-work with a "Defiance" Patent Variety Turning Lathe?

If not, we know it will be to your advantage to let us install in your plant a modern, labor-saving lathe that will come up to your expectations in every respect.

Time has Tried and Tested this Machine

And it has never been found wanting. Exact duplicates are always turned in either round, oval, hexagon, octagon, or square pieces.

This is a speedy machine and can be handled by inexpensive labor. We build it in various lengths from 18 in. to 72 in.

Write us for Catalog and Price

The Defiance Machine Works, Defiance, Ohio, U.S.A.



32-inch Variety Turning Lathe

Solid and Inserted Tooth Circular Saws

We make a specialty of these lines

**We remake old Solid Tooth Saws
into new Inserted Tooth Saws**

Write to us for quotations.

Our saws have been before the public of Canada since 1855, and have won a reputation far excelling any other make of saws, combining as they do so many points of marked superiority.

By the old method the tempering of circular saws was to a great extent a matter of chance.

By our Patent Process that uncertainty is entirely avoided.

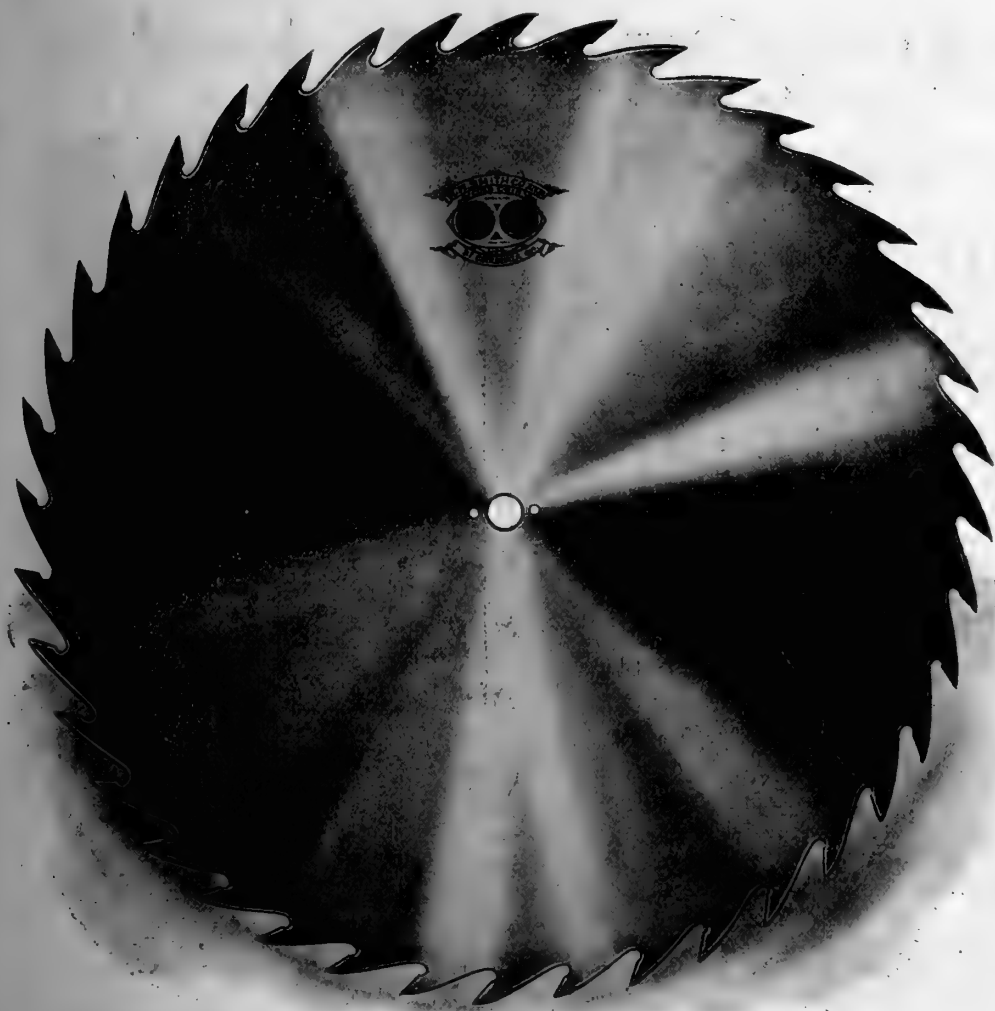
Being tempered and straightened by heat and pressure in air-tight ovens at a uniform heat between heavy revolving plates, we produce a perfectly even temper throughout the plate, and being free from that uneven strain or tension caused by so much unequal hammering they are not so liable to buckle, which was a great source of trouble and expense in the old style of saw.

These saws will stand up to their work better under all circumstances, and being made of a higher quality steel than it is practical to use by the old method, they hold an edge longer and will do more work than any other saw on the market.

We are prepared to make prompt deliveries of all Saw Orders—Rush Orders by mail or wire receive immediate attention.

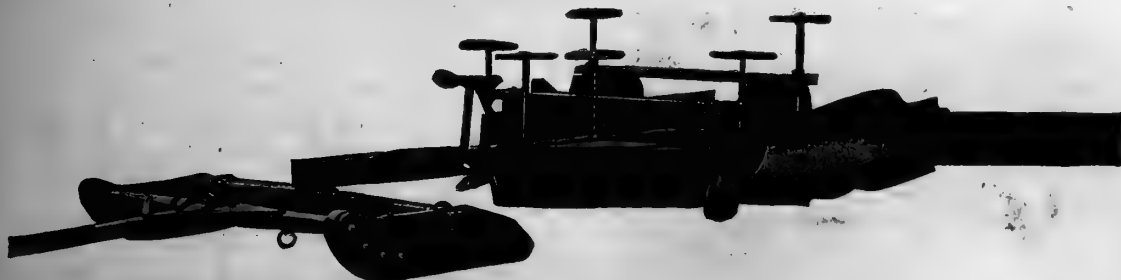
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Saw Manufacturers,
ST. CATHARINES, ONT.



Pink's Lumbering Tools

The Standard Tools



Agents for Brazel Patent Snow Plow. Manufactured by Bateman-Wilkinson Co. Ltd. Toronto

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Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants

Finest Quality

Split Maple

Cant Hook and

Peavey Handles

Carload or dozen

Boom Chains

Pike Poles

Skidding Tongues

Boat Winches, etc.

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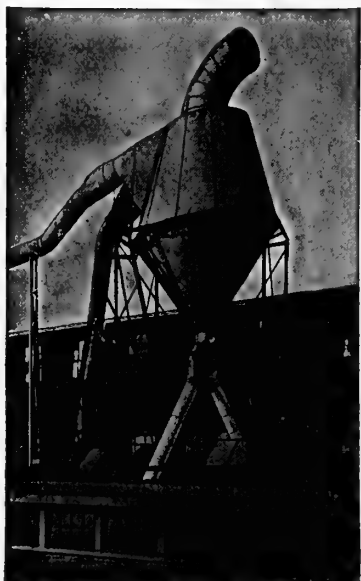
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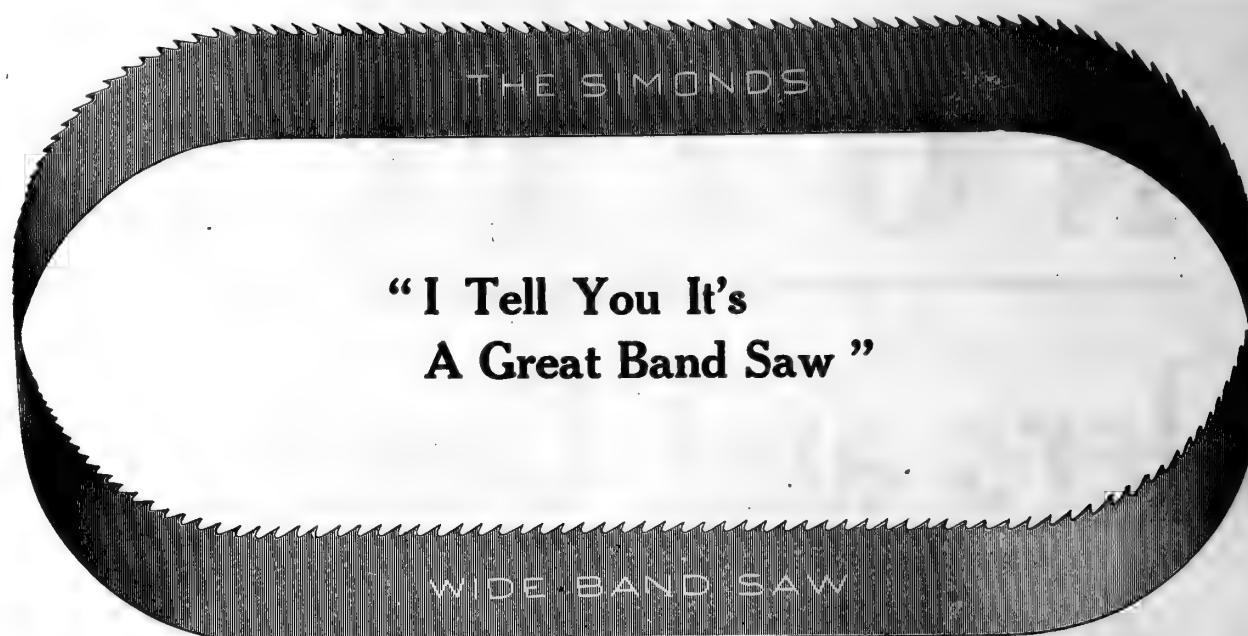


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Vol. 34

Toronto, April 15, 1914

No. 8

Ontario's Workmen's Compensation Act

The approaching enactment of a workmen's compensation law by the Province of Ontario is an event which will be of the greatest importance to the lumbering industry, and which, under the bill as prepared by the Commissioner, contains factors of such a serious nature that lumber industries, woodworkers and all who are connected with the industry in any form will find themselves face to face with a new situation which is likely to alter materially the conditions under which they carry on their business. The situation, is in fact, so serious that the lumbering industry in Ontario should do everything in its power to co-operate with the Canadian Lumbermen's Association and the Canadian Manufacturers' Association in their efforts to cope with the difficulties which will inevitably arise under the crude and impracticable form of the Act which is being imposed upon the province.

Briefly, the bill provides that compensation for injury must be paid to an employee regardless of questions of negligence. The compensation is to be adjusted by a government-appointed commission and paid out of funds to be secured by a tax upon employers in groups. The compensation is to be based on certain schedules and percentages fixed by the Act, the maximum being 55 per cent. of the injured man's former earnings; which payment is to be continued during the period of disability, and if necessary for life. In cases of death certain fixed monthly payments are to be made to the widow during her life or to other dependents for varying terms.

No employer, however anxious he may be to make a profit out of his business will reasonably object to the principle of compensation for industrial accidents so long as that compensation and the system for its administration are worked out on a business basis and with due regard to business considerations. The proposed bill, how-

ever, is so inconsistent with elementary business considerations and so unworkable in its present form that any attempt to operate it will require the careful and intelligent co-operation of employers, individually and collectively, if the bill is not to be a source of serious embarrassment and perhaps ruin to some of our industries.

The proposed Act divides employers into three, or rather four, general divisions. Manufacturers, lumbermen, builders, etc., are placed under a compulsory mutual insurance system administered by the proposed Commission. Railways, navigation companies, municipalities and others are placed under the jurisdiction of the same Commission so far as adjustment of claims is concerned, but are not to be insured in the state system though they may be compelled to insure in an employers' liability insurance company. The great mass of other employers such as wholesalers, retailers, professional men, etc., are placed under a new and drastic liability law whereby they become subject to an action in the courts for unlimited damages without being able to plead that the injury was due to the contributory negligence of the workman or to the negligence of a fellow servant. A fourth class—farmers and employers of domestic servants, are excluded from the operation of this latter part of the Act and so form a fourth group. It would be incorrect, however, to say that these classes do not come under the Act at all, for, in so far as any farm hand or domestic servant may be engaged in manufacturing he would apparently come under the same law as the manufacturer. "Manufacturing" is defined to include: "making, preparing, altering, repairing, ornamenting, printing, finishing, packing, assembling the parts of and adapting for use or sale any article or commodity."

Absurd as it may seem the farm hand engaged in any operation covered by this definition would be literally under the same law as a workman in a factory.

One of the most difficult and unsatisfactory features of the bill is the vagueness of the line, if there is such a line, between the regularly established lumberman and the farmer who may casually cut a log or two in his bush. It would appear that if a farm hand were injured in the course of cutting down a tree for lumber his compensation would be paid out of the lumbermen's fund. In other words, he would be considered as being insured in that fund. The question arises, however, whether it is probable that every farmer who casually engages in lumbering for a few days will have paid his premium or assessment into the lumbering fund. If the premium has not been paid the workman will nevertheless get his compensation out of the fund—which means that the other contributors to the fund have paid the insurance. Even if the farmer comes in after the accident has happened and pays his premium the bulk of such insurance will have remained unpaid since for one farmer who has had an injury a hundred, who should also have paid their premium, may have escaped. It would be as if a property owner could come to the fire insurance company after the fire and pay his premium and collect his insurance.

The above is illustrative of scores of difficulties and anomalies, some of which lie on the face of the Act as it stands and others of which are apparent only after more careful study. There is every reason to believe that the government is perfectly aware of the faultiness of the measure; but having had the bill prepared by the Chief Justice of Ontario it is apparently thought incumbent upon the government to adopt the measure substantially as prescribed. The plea of the government is that the details must be worked out by the administering Commission and that the necessary amendments can be made at a succeeding session of the Legislature. Probably one of the most remarkable and unsatisfactory features is the tremendous power which it is proposed to vest in the administering board. It is the custom in appointing an administrative body to circumscribe its powers and jurisdiction as definitely as it is possible to do. In the nature of things any other policy would involve the gravest dangers. The proposal in this Act, however, is to leave the administering Commission in the widest possible manner arbiter of its own jurisdiction and the interpreter of its own powers. Furthermore,

every effort is made to preclude any possibility of appeal from its decisions though in this the bill has over-shot the mark with the probable result of necessitating an immense amount of litigation before the most elementary questions of jurisdiction are determined.

Under the scheme of subdividing industries into groups, as included in the schedules of the bill, schedule 1. covers industries in which employers are liable to contribute to the general accident fund. The first four classes of this schedule are as follows:—

Class 1.—Lumbering; logging, river-driving, rafting, booming,

sawmills, shingle mills, lath mills; manufacture of veneer and of excelsior; manufacture of staves, spokes, or headings.

Class 2.—Pulp and paper mills.

Class 3.—Manufacturers of furniture, interior woodwork, organs, pianos, piano actions, canoes, small boats, coffins, wicker and rattan ware; upholstering; manufacture of mattresses, or bed-springs.

Class 4.—Planing mills, sash and door factories, manufacture of wooden and corrugated paper boxes, cheese boxes, mouldings, window and door screens, window shades, carpet sweepers, wooden toys, articles and wares or baskets.

Wrongful Use Injures Market Conditions

The objections which Canadian lumber manufacturers have to the importation of yellow pine into Canada are based more upon the improper use of certain classes of pine, rather than its extensive importation. For certain purposes, the use of longleaf yellow pine in Canada is acknowledged to be necessary and Canadian lumber manufacturers have no objection to fair competition from this source. The real objections are based upon the importation of low grade shortleaf yellow pine which is especially subject to the attack of dry rot. This class of material, when used ignorantly in places for which it is not suited, has been the cause of widespread criticism of yellow pine in general. In the consideration of this matter it is interesting to note the views recently expressed by Dr. von Schrenk, consulting engineer of the National Lumber Manufacturers' Association. Dr. von Schrenk exhibited pieces of factory timbers that had been taken from a Canadian factory, after having been attacked by dry rot, within a comparatively short time after being used in the construction of the plant. This example was one which led the speaker to dwell at some length upon the necessity for better methods of salesmanship on the part of manufacturers. In Canada, he said, as a result of re-

pairs and reconstruction made necessary in some of the big plants by reason of the poor quality of pine used in their construction, a widespread feeling had developed against yellow pine, a feeling that was most unjust.

In the Canadian plant from which the examples exhibited were taken the specifications had called for high grade longleaf Georgia pine. The material furnished had been a very poor grade of loblolly, or North Carolina pine, totally unfit for the purpose for which it was used. He believed that the manufacturer who supplied the material was entirely unaware of the use to which the timber was to be put. The average lumberman was the poorest merchant on earth. Before filling a specification for timbers or lumber, the manufacturer ought to find out the purpose for which it was to be used and if the material called for was unfit for that particular purpose he should endeavor to have the specifications changed and substitute the proper material. The sample of factory timbers, with the dry rot, he said, indicated simply a case of fool application, and if the manufacturer had known what it was to be used for, he would not have sold the timber.

A Washington View of B. C. Royalty Act

A Washington letter to a number of newspapers in the United States, prints the following relative to the recent Timber Royalty Bill passed at the last session of the Legislature:

"The Canadian Province of British Columbia is showing the way to all other governments in the matter of doing things for the common people. The B. C. Legislature passed a law introduced by the Minister of Lands, Hon. Wm. R. Ross, which assures to the citizens of that province an income, within ten years, of three million dollars a year from royalties on publicly-owned timber. This Act, according to information which comes to interested public men in Washington, does for publicly-owned timber in British Columbia, what the conservationists, under the leadership of Gifford Pinchot, have been trying to secure for the people of the United States

"The Act retains in the Provincial Government, for the people, the fee simple title to all timber lands; it permits the taking of timber claims one mile square at an annual rental of \$120 per claim, and for the payment to the government of a stumpage price which rises gradually with the increased value of timber. Under the old Act of 1905, the stumpage price per thousand feet was 50 cents. The new Act increases it to 75 cents a thousand feet, effective in 1915, and provides that five years later there will be added to the royalty price

25 per cent. of the increased value of lumber at that time, above a minimum price of \$18 per thousand, each five years thereafter the same thing will be done again, the percentage taken by the government to increase gradually from 25 to 40 per cent., the whole arrangement covering a period of about 40 years.

"This means, first, that the lumbermen get a reasonable profit out of their operations—the government takes nothing unless the price is above \$18 a thousand. It means further, that the government, the people, share in the increased value of their timber. It establishes a great profit-sharing, co-operative principle, in which the government and the timber operators are partners. The government retains the title to the land, and their right to prescribe the way in which the timber shall be cut. The people's interest is protected, and at the same time lumbermen are encouraged to take up holdings and develop the timber industry.

"The great lesson for the United States in this B. C. Royalty Act lies in the recognition by the Provincial Government that the people should share in the increasing value of their own property—a principle which American conservationists under the leadership of Pinchot, have been and are fighting to have enforced in the development and use of public waterpowers in the United States."

Will Teach the Lumber Business

At the request of prominent lumber interests, a two-year course in the business of lumbering is to be opened next year by the Harvard Graduate School of Business Administration, in co-operation with the Harvard Forestry School. In a bulletin announcing this course, the school makes the following interesting references to the situation:—Rising labor costs, coupled with decreasing labor efficiency; higher prices for all supplies and machinery; and the nearly complete absence

of scientific knowledge of the business of manufacturing and marketing lumber, have brought some of the largest owners and buyers of standing timber to a pass where they seem to face certain and heavy loss unless present methods can be greatly improved in the near future.

It has been found that forestry education, after the German pattern, does not meet the needs of the lumbering interests. It is good, and necessary, the lumbermen admit, to know how to protect existing

tree growth, and to start new growths. But the present and acute problem is how to manufacture the existing trees into lumber and to sell the lumber at a profit.

Labor changes have played perhaps the largest part in bringing the lumbering interests to their present difficult pass. Ten years ago the men of the lumber camps and mills were predominantly Yankees and men of the northern European races. They have been replaced by French-Canadians, and a medley of South and East Europeans—Greeks, Poles, Hungarians, and others,—who are known under the collective name of "Bohunks." The new labor is constantly shifting. Three men are now needed to do what two men formerly did. Wages and supplies of every sort are higher. The French-Canadians are good axe men, but they are "too flighty to be left to themselves. If 'something happens' they go all up in the air." The "Bohunks" are inferior to the French-Canadians, are unreliable, and require constant supervision.

In the mills there is a similar lack of economy and efficiency. Hardly a lumberman in the country knows just what his product is costing him. To many manufacturing lumbermen the idea of figuring depreciation on a mill plant is strange and incomprehensible. So also, charging interest on the capital invested in the plant is a

new idea. Similarly, the mills themselves are usually inefficiently arranged. Hand labor is found carrying material in the mill that can be handled much more cheaply by mechanical conveyors. Plants in general are imperfectly laid out, and there is waste of labor and of time in all of the ways that the efficiency engineer has made familiar as wastes by his reform in other types of manufacturing plants.

Much lumber is being manufactured that it doesn't pay to work up. A recent investigation by a member of the Harvard Forestry School faculty showed that a certain company was working up something like forty per cent. of its logs at a dead loss. The boards from logs of less than a certain diameter did not bring enough to pay for cutting them out of the log. The discovery of this fact required careful cost accounting from the living tree, to and through the mill, and into the final market.

The whole manufacturing and marketing end of lumbering is in greatest need of just such scientific study as this example shows. Manufacturing costs must be reduced to compensate for increasing labor expenses, and this means the re-arranging of plants for greatest economy of operation, the substitution of cheap mechanical handling for hand labor wherever possible, and the exclusion of all material that will not pay a profit on the working up and marketing.

Railways Want Payment for Spotting Cars

A matter of great importance to shippers of lumber to and from points in the United States is the recent application of the railway companies of the United States to the Interstate Commerce Commission for permission to impose a charge for the service of spotting cars. This application is being opposed vigorously by many of the lumbermen's associations in the United States, among them the National Wholesale Lumber Dealers' Association, which has prepared a concise, but forcible brief for presentation to the Interstate Commerce Commission. The brief calls attention to the fact that, for a great many years, it has been the policy of the railroads, both in the United States and Canada to encourage the construction of industry spurs, and this has not been limited to any particular industry. This policy has enabled the carriers to develop their traffic to an enormous extent, with comparatively little outlay on their part; in fact, in a great many instances, they have made no outlay whatever. A large percentage of the business of the country has been built up on this basis. This railroad rate has always been recognized as covering not only the conveyance of a shipment, but the full service, which includes furnishing the car, a proper place at which to load it, the conveyance of the car and its terminal delivery. Deliveries to industry spurs do not constitute a service for which carriers can rightfully make an additional charge. The brief points out

therefore, that delivery on a public steam track is a service which is not obtained by industries having spur tracks. Spur track delivery costs the carrier no more and in the majority of cases less than public team delivery, and it might even be argued that an industry with a spur track should be required to pay less for accepting delivery at such a point, which is less expensive to the carrier. An industry spur is, in fact, of immense advantage to a carrier, assuring it, the traffic of that industry, both inbound and outbound. Industry spur tracks increase the terminal facilities of the carriers, at little or no expense to themselves, and in many cases are constructed at much expense to the industry itself. Moreover, they encourage much more rapid unloading and releasing of cars.

In conclusion the brief calls attention to the fact that if a spotting charge were adopted and even a small percentage of industries with spur tracks were to demand the proper placement of their cars on public team tracks, terminals would undoubtedly become congested involving serious embarrassment.

The volume of trade in lumber between Canada and the United States is so extensive that this question is of much importance to Canadian exporters and importers and the result of the application to the Interstate Commerce Commission will be awaited with widespread interest.

Canada's Exports of Forest Products

Exports of forest products from Canada during the twelve months ending January 31st, 1914, were valued at \$42,707,781, as against \$42,873,710 in the twelve months ending January 31st, 1913, and \$40,691,814 during the twelve months ending January, 1912. For the twelve months ending 1911, the total value of exports of forest products was \$46,155,909.

Exports of wood and manufactures of wood during the twelve months ending January 31st, 1914, and the twelve months ending January 31st, 1913, were valued as follows:—

	1913	Total	1914 To United Kingdom	To United States
Wood and mfrs. of—Total	49,160,051	49,629,065	12,277,867	33,682,727
Logs	1,068,247	529,281	120,150	398,726
Lumber—Deals, pine	1,462,022	1,352,430	1,262,870	64,793
Deals, spruce and other	5,582,410	6,566,062	5,959,156	515,445
Laths, palings and pickets	1,943,152	1,952,099	24,060	1,895,013
Planks and boards	20,289,807	19,851,892	1,842,830	15,380,085
Shingles	1,372,455	1,531,824	292	1,494,968
Timber, square	1,799,946	584,440	557,778	12,323
Wood blocks for pulp	6,450,504	7,082,385	.....	7,082,385
Wood pulp	5,444,474	6,094,657	1,232,268	4,559,909

Imports of wood and manufactures of wood for the twelve months ending January 31st, 1914, from the United States were

valued at \$24,934,988. The total from the United States and the United Kingdom was \$26,194,973, as compared with \$26,852,755 during the twelve months ending January 31st, 1913.

During the ten months ending January 31st, 1914, imports of some of the important classes of forest products from the United States were valued as follows:—fence posts and railway ties, \$2,087,687; planks, boards, etc., dressed on one side only, \$3,877,843; timber, hewn or sawn, etc., \$477,250; pitch pine, \$2,586,269; oak, \$2,261,653.

Exports of forest products for the ten months ending January 31st, 1914, to the United States included the following:—planks and boards, \$13,670,161; shingles, \$1,535,781; scantlings, \$762,026; pulpwood, \$6,092,937; chemical wood pulp, \$2,020,373; mechanical wood pulp, \$1,850,531.

Exports of forest products to Great Britain during the ten months ending January 31st, 1914, included the following: pine deals, \$1,258,792; spruce deals, \$545,744; deal ends, \$246,124; planks and boards, \$1,697,593; scantlings, \$358,329; white pine square timber, \$311,890; red pine square timber, \$31,343; oak timber, \$258,619; elm timber, \$310,847; birch timber, \$111,136; mechanical wood pulp, \$1,131,742; chemical wood pulp, \$5,412.

The Western Freight Rates Judgment

Dominion Board of Railway Commissioners Gives its Decision Reducing Scale of Charges in Western Canada—Lumber Rates Unchanged—Details of Finding.

Judgment has been given by the Dominion Board of Railway Commissioners in the Western Freight Rates case, which involves the whole question of freight rates in Western Canada. Although no alterations are to be made in the freight rates upon lumber or lumber products, the matter is one which affects the lumber industry closely on account of the bearing which it has upon business conditions in Western Canada and upon the railroads themselves, which are among the largest consumers of lumber. After discussing the evidence and argument in connection with the case, the judgment outlines a comprehensive basis of tolls and a complete rate structure for all railways in Western Canada subject to its jurisdiction.

The territory west of the Great Lakes is divided into three sections. The first is called the Prairie Section, extending from the Great Lakes to the Mountains; the second the Pacific Section, including mainland rail lines in British Columbia; and the third the B. C. Lakes Section, including the inland navigable waters in that Province.

A standard scale of maximum freight rates is fixed for each section. The lowest scale in the West, now known as the Manitoba standard has been amplified to show rates up to two thousand and one hundred miles, and will apply throughout the entire Prairie section and on the British Columbia Lakes, abolishing the higher scale now charged in Saskatchewan and Alberta. What will be known as the Pacific scale is on a somewhat higher basis and will govern in Pacific territory. These changes result in substantial reductions from the present standard maximum scales in Saskatchewan, Alberta, and British Columbia.

Through rates from Eastern to Western Canada are based on those charged from Port Arthur or Fort William. After citing reductions already made by order of the Board in the Regina Rate Case, further reductions are made and a more uniform basis adopted. Examples of the new rates from the Lake Terminals are given below, those to other points being similarly scaled:—

Classes	1	2	3	4	5	6	10
To Winnipeg Old rates	86	72	57	42	38	34	20
Winnipeg New rates	85	71	56	42	38	32	19
Regina Old rates	154	129	102	77	68	59	34
Regina New rates	146	122	98	73	65	56	33
Moose Jaw Old rates	159	132	106	79	71	61	36
Moose Jaw New rates	153	128	102	77	69	60	35
Calgary & Edmonton Old rates	224	186	149	112	102	90	52
Calgary & Edmonton New rates	213	178	142	106	95	85	49
Saskatoon Old rates	175	146	116	87	78	68	40
Saskatoon New rates	164	137	110	82	74	64	37
Lethbridge Old rates	215	179	142	107	96	85	49
Lethbridge New rates	201	167	133	100	90	79	46
Nelson & Revelstoke Old rates	303	253	202	158	140	133	73
Nelson & Revelstoke New rates	251	209	167	126	115	104	61

Lumber Freight Rates

Lumber and joiners work from British Columbia to Prairie destinations have been already reduced following the Board's Order in July, 1913. The reference to these in detail is as follows:—

"While this case was in progress, but on complaint standing for some time, the board made an order reducing rates on lumber. The order was appealed; but the issue was settled between the railway company and the shippers. The adjustment having taken place after evidence was given as to lumber rates in the North-west, Mr. Hardweell has worked out the rates situation as left by the agreement referred to. His report on the subject is as follows and in my opinion should be adopted and no further action taken at the present time:—

"By order No. 18738, February 19th, 1913, the board reduced the rates on lumber and other articles carried at the lumber rates from British Columbia shipping points, Manitoba points immediately east of Winnipeg, to and including Molson on the C. P. R., Giroux on the C. N. R., and Hazel on the G. T. P., so as to exceed the rates to Winnipeg by not more than two cents per 100 pounds to the three points named where the difference had been five or six cents. In scaling the new rates so ordered the rates had to be cut down farther east in some cases beyond Kenora.

"As a result of the complaint from the Mountain Lumber Manufacturers' Association, the rates on lumber shingles, etc., from the British Columbian mills to the prairie territory were further reduced by a tariff of the C. P. R. dated July 10th, 1913, and by the G. N. R.'s British Columbian lines dated September 2nd, 1913. The following table which is merely illustrative indicates the extent of the reduction in cents per 100 pounds from Golden, B.C., which has been taken as a

central shipping point, but corresponding decreases were made from Vancouver, Savona, Three Valley, Cranbrook and the other mills.

To	Joiners Work	Clear Cedar	Fir, Pine, etc.	Shingles
Calgary, Alta.	33½	1½	....	....
Edmonton, Alta.	26	4	1	1
Lloydminster, Alta.	22½	4	....	....
Wainwright, Alta.	21½	4	....	....
Swift Current, Sask.	21½	5	....	....
Regina, Sask.	17	5	....	....
Indian Head, Sask.	16	5	....	....
Outlook, Sask.	13	5	....	....
Rosetown, Sask.	14	4	....	....
Humboldt, Sask.	13½	6	3	1
Waterous, Sask.	12	5	....	....
Lipton, Sask.	12	10	5	5
Imperial, Sask.	12½	10½	5½	5½
Wilkie, Sask.	16	4	....	....
Prince Albert, Sask.	12	5	....	....
Weyburn, Sask.	15½	5	....	....
Yorkton, Sask.	9	8	3	3
Saskatoon, Sask.	12	5	....	....
Esterhazy, Sask.	10	8	3	3
Winnipeg, Man.	12	5	....	....
Deloraine, Man.	12	5	....	....
Gladstone, Man.	8	5½	½	½
Morden, Man.	12	5	....	....
Stonewall, Man.	12	5	....	....
Binscarth, Man.	8	7	2	2
Souris, Man.	12	5	....	....
Dauphin, Man.	11	6½	3½	1½

Lumber Rate Comparisons

Something has been said, although I do not recall it, in the evidence, about the blanketing of the Winnipeg rates back into Saskatchewan, and even into Alberta; but it is obvious that with (say) 36½ cents on lumber from Vancouver to Calgary and 40 cents into Winnipeg, there is not much margin for graduation over the intervening 837 miles. What the company did was to scale the rate upwards for 128 miles from Calgary to Tilley, Alberta, where the 40 cent rate begins and continues to Winnipeg. Similarly the Calgary shingle rate of 38 cents was graduated through 479 miles to Pinkie, Sask., first station west of Regina, where the 50 cent Winnipeg rate commences. A graduation that is progressive could be obtained only by advancing the Winnipeg rates, or by a heavy cut in the Calgary rates, against which no complaint has been registered.

The same situation prevails south of the international boundary; the rates from the Washington coast mills to the Great Northern's Red River points (Forgo and Grand Forks, N.D.). United States carriers still classify cedar lumber with shingles at higher rate. The Great Northern's 50 cents shingle and cedar rate is backed up for 565 miles from Fargo to Vandalia, Mont., and its 40 cent fir lumber rates for 619 miles to Exeter, Mont., compared with the C. P. R.'s 362 and 370 miles, respectively, to Pinkie and Tilley.

As regards the lumber rates from the Lake of the Woods district, from Selkirk, and from the Spruce belt of Northern Manitoba and Saskatchewan, some of Mr. Cowan's comparisons are apt to prove misleading, unless put beside the tariffs themselves, for the reason that in order to secure similar distances from different shipping points, destinations have had to be selected from groups of stations of varying distances, but all taking the same rate. That the grouping of a number of stations at the one rate particularly as the hauls lengthen is necessary, must be obvious, since the stepping up of the rates from station to station would produce rates, which, for the longer hauls, would be prohibitive and useless. Such grouping is a recognized principle in tariff construction everywhere. The lumber rate of 11 cents from Kenora to Portage La Prairie (182 miles), is set against 12½ cents from Selkirk to Killarney (188 miles), thus apparently showing that if one is reasonable the other must be excessive. But the Killarney rate extends farther onto Boissevain, 207 miles. The purpose of this particular exhibit seems to me to show a higher basis of rates for similar distances from Selkirk than from Kenora; yet if we set this Selkirk-Boissevain 207 rate of 12½ cents against the rate of 14 cents for 210 miles from Kenora to Austin, we get a reverse result.

"One more example: At the same page counsel cites 20 cents from Selkirk to Indian Head against 19 cents for nearly the same dis-

tance from Kenora to Russell. But the 20 cent rate from Selkirk operates as far as Regina, 382 miles, while for 383 miles from Kenora to Percival, Sask., the rate is 21½ cents; again a comparison against the exhibit.

"Whether it would be worth while to attempt the removal of these discrepancies only an exhaustive analysis of the tariff and the mileage could show. It appears that during 1913 less than two cars per month were shipped from Selkirk."

A review of the Judgment shows that the whole structure of Western rates, starting from the standard maximum mileage scale, the class tariffs from Lake Superior and Pacific Coast terminals, the class distributing rates, commodity tariffs applying on grain, coal, live stock, cement, fruit, vegetables, brick, sand stone, lumber, dairy products, etc., have been closely inspected and definite decisions given in connection with each.

The Monetary Outlook More Normal

Minister of Finance Sees a Turn in the Tide and Calls for Confidence and Courage

The budget introduced by Hon. W. T. White, Minister of Finance at Ottawa, on April 6th, although containing no alterations in the tariff upon articles in which the lumbering industry is directly interested, was of great importance to the country in general on account of the alterations made upon the duty on agricultural implements, wire rods, building stone, etc.

From the point of view of the lumbering industry, the most interesting feature was a section of the speech delivered by the Minister of Finance in which he referred to economic and industrial conditions in Canada and in the world in general. "There is no doubt," Mr. White said, "that the severe and prolonged financial stringency through which the business world has passed and from which it is only now emerging, marked the culmination of one of those so-called trade cycles well known to economists. Viewing world-wide conditions during the past few years it is apparent that such a cycle has been passed through. We have seen normal money conditions, good times throughout the world, the expansion of enterprises, vast increase in capital expenditure upon railway and other construction in Asia, India, Egypt and in North and South America. Last year there was experienced a shortage of capital in all the financial centres, with constantly increasing interest rates, until after a period of prolonged and severe liquidation and the elimination of vast amounts of inflated values, something like normal money conditions again prevail. The world is now in a period of general, but it is hoped, temporary trade slackening. Without such slackening the financial stringency must have continued. The trade slackening alone could bring it to its appointed end. The conditions I have referred to are world-wide. We are particularly interested in those of Canada. Our production has shown a most gratifying increase in all the great departments of our national activity. In foreign trade this has been our greatest year. What is our present outlook? Bankers and business men unite in the opinion that while it is a time for prudence and caution, it is also a time for confidence and courage. The strength of Canada lies in her vast natural resources. That is the rock upon which our prosperity is soundly based and founded. Any depression, generally speaking, can be but temporary in character until such time as normal money conditions, joined with business confidence, again restores the wonted activity of the nation. While this is so, we must not close our eyes to the fact that we have been passing through a period of considerable inflation. Our railway policy has resulted in the construction of two vast new systems within the past dozen years. Construction upon the main line of these systems is nearing completion. It must, however, be borne in mind that railways are never completed, are always building and rebuilding, always extending their branches and feeders. I do not, therefore, look for any abrupt cessation in connection with our railway construction."

Real Estate Situation

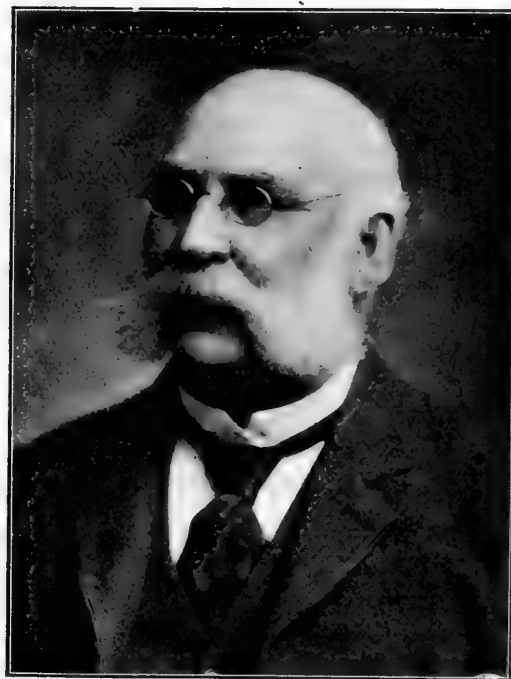
"There has been in real estate throughout Canada a long-expected setback in values of speculative, suburban and business properties. On the other hand, the values of farm and central business and residential city properties are, generally speaking, not only being maintained, but will undoubtedly, with the growth of the Dominion, tend to appreciation. On the whole the readjustment which is going on in real estate conditions throughout Canada is recognized as inevitable and salutary. Commercial prospects for the immediate future seem to me to be encouraging. Conditions will, I think, gradually improve with the returning confidence and easier money. By reason of the Autumn conditions of last year which permitted soil preparation on an unusual scale in all parts of the Dominion the outlook for agricultural production this year is most favorable and we may look forward to increased production in those other great departments, our forests, fisheries and mines."

"Looking back upon the year 1913, it is apparent that the whole world passed through one of those severe financial crises with which

the student of economics is familiar as regularly recurring phenomena in the financial world. The Balkan War, while immediately responsible for the critical conditions which developed, probably disclosed rather than caused the situation. Worldwide expansion in trade, unprecedented demand from all parts of the world upon the loanable capital in the international financial centres, the constantly increasing expenditures upon militarism and armaments, the exhausting wars of the last few years, personal and public extravagance, speculation and price inflation, all co-operated to bring about the financial conditions under review.

Death of Herman H. Cook

The death occurred at Toronto on Sunday April 12th, of Herman Henry Cook, well known to all lumbermen in Ontario on account of his long and intimate connection with the lumbering industry of the province. Mr. Cook was born in Williamsburg, Dundas County, Ont., on April 27th, 1837, so that he had almost completed his 77th year. He came of Loyalist stock. His grandfather, George Cook, at the time of the American Revolution, left the Mohawk Valley of New York and settled in Dundas County, Ont. He had two sons, John and George, of whom the former was for many years a member of the old Parliament of Canada, and the latter—the late Mr. Cook's father—distinguished himself as an officer in the War of 1912. Mr. Cook's mother:



The late Herman Henry Cook, Toronto.

was of German descent, he being the youngest of five sons born in Dundas.

Herman Cook was educated at the Iroquois Grammar School, and in 1858 went into the lumber business in Simcoe County. He secured extensive limits in the Georgian Bay region, and built at Midland the largest sawmill then existing in the Dominion. He accumulated a considerable fortune from this business, and was largely instrumental in the building up of the town. The Midland mill was burned in 1877.

Mr. Cook was president of the Ontario Lumber Company, the corporation which grew out of a business founded by him 56 years ago. He was also one of the syndicate, headed by Sir W. P. Howland, which offered to build the Canadian Pacific Railway in 1880.

The late Mr. Cook was also widely known as a prominent member of the liberal party and sat in several sessions of the Ontario and Dominion parliaments. He first entered politics in 1871, when he unsuccessfully contested the provincial riding of North Simcoe. He was elected by the same constituency for the federal house in the following year. He was re-elected in 1871, defeated in 1878 and returned to the provincial house, where he was elected in 1879 and remained until 1882. Next he was elected to the federal house for East Simcoe in 1882 and occupied this seat until 1891, since when he occupied no further public office.

Mr. Cook's death came quite unexpectedly. He had maintained his usual good health until Monday, April 6th, when he commenced to suffer from a slight ailment. On Friday he seemed to have recovered, but late on Saturday afternoon was seized with apoplexy from which he failed to recover, and passed away in the evening of Sunday, April 12th.

The Reader's Viewpoint on Trade Topics

Retail Trade Expecting a Good Season—Low Water Making Operators Anxious—B. C. Outlook More Hopeful

Articles or letters to the Editor of the Canada Lumberman, dealing with trade conditions, or discussing questions of interest to manufacturers, wholesalers or retailers of lumber are always welcomed by our readers. Here are a few that have been received lately:—

Toronto Outlook Excellent

Editor Canada Lumberman:

Toronto, April 3rd.

We are very pleased indeed to say that our business for the first three months of this year is just equal to last year's record, but much better than 1912. The outlook, so far as Toronto is concerned, is very bright indeed. We understand that architects' offices are filled up with all kinds of work for factories and houses. The housing problem appears to be very much in evidence and, from information gathered, we think that the demand for houses will be even larger than it has ever been in Toronto, while factory business, we think, will be fully equal to that of 1913; at least indications are pointing that way now.

All of our customers have reported that sales are good and that they have not had any trouble in disposing of the houses they erected last year. Even more surprising is the fact that they have been able to get much larger payments than prior to 1913. It looks as though the people have been saving their money instead of putting it in precarious investments, realizing that a good home is about the soundest investment that one can put money into. Further, all our customers are duplicating their business this year, and even more. They state that money is becoming easier and they are able, in most cases, to place their loans to good advantage at about six per cent. Collections have been very slow; they usually are at this time of the year anyway, owing to most of the builders laying out money for the land. The price of lumber, we think, will probably go up a little but not very much. Conditions in the United States have made quite a difference with regard to prices in a certain class of our lumber, but it appears that there is a general improvement all along the line over there. So it means that they will not continue to swamp our market over here, which will mean also that our manufacturers will be able to get a little better margin for their stock. We do not think retail prices will change a great deal except in hemlock, which should come up very materially.

Our requirements for 1914 are based on about the same kind of stock and quantity as we had last year, which, when compared with the general conditions, was a record year with most of the concerns in Toronto.

The outlook for the farmers' trade appears to be very bright from inquiries received, and there was never a brighter outlook than at the present time, and, what is very encouraging is that they all appear to have plenty of money with which to go ahead and do their building. They are also getting out of the old-fashioned idea of simply building a place to live in, as they all want to have the very best stock with the latest ideas and patterns, and it will be up to the retailers of the small towns to wake up to this fact, if they do not want the trade to be taken away from them by the large city manufacturing concerns.—Webb Lumber Company, Limited.

Chatham Trade has bright Appearance

Editor Canada Lumberman:

Chatham, Ont., March 25th.

So far as the woodworking plants are concerned in this district we report as follows:—

During January and the early part of February, trade in our line was somewhat quiet, but during the latter part of February and March to date, things have picked up somewhat, and are giving a much brighter aspect to trade. We feel, from present conditions, and from inquiries which we have had, that trade will be fairly good for the coming season. In our district, plans are being prepared for a number of large buildings, and it seems to us that there will be a number of buildings, such as houses, barns, etc., erected in the surrounding country.

As to collections, in our particular line they have been fairly good, and, although in some cases, as is usual, parties do not pay until they are forced to do so, in nearly every case where payment is forced, we have had no trouble in getting results.

We find that prices range about the same as at this time last year, with probably a few exceptions, where certain classes of stock

are low, and the holders naturally hold out for as high a price as they can possibly get.

We believe that all retail yards in our particular line in this part of the country are pretty well stocked up, and will have enough to supply the demand until the new cut is put on the market.

In this particular district a number of manufacturers have been somewhat quiet, and are running light handed, that is, not having their usual force of employees, but we feel that, in a short time matters will resume their normal condition, and factories will put on their usual force of men.

Farming is one of the most important industries in this part of the province. The farmers are in an excellent condition, as they follow, in nearly every case, mixed farming, that is, not only the growing of grain, but also the raising of horses, cattle, pigs, sheep, etc., and as you know, the markets, especially in stock, have, for some time, been very good. We believe that the farmers are in as good a condition financially as has ever been the case.

Our own trade conditions at the present time do not compare quite favorably with conditions a year ago, as last year we had several large orders from the west, which kept us quite busy, and on account of present conditions in the west, we have not been able to secure the same business this year, and we feel that other lines are affected in the same way.—John Piggott & Sons.

A Good Season Expected at Exeter

Editor Canada Lumberman:

Exeter, Ont., March 26th.

We are pleased to report, from our own standpoint and from the present outlook, that we are going to have a good season. Taking our own local trade, prospects are good and our wholesale trade is coming in as fast as we can handle it. We have at present duplicated a number of our last year's contracts at advanced prices.

We experienced some delay in the settling of accounts, but by looking after them we have received most of the credits, and, as our wholesale terms are thirty days we find no difficulty in collecting them.

Comparing business today with that of last year at this time, we find it a little better and hope to keep this record if at all possible. We are carrying just enough stock to run our business, as we feel we will be better off in the end.

We think the pine markets will be about the same as last year. The hemlock is selling a little lower than last year but we still expect there will be a still slighter decrease as, locally, the mills have more hemlock in the yards than they have had for some time. The Ross-Taylor Company, Limited.

Expecting a Gradual Improvement

Editor Canada Lumberman:

Toronto, Ont., April 2nd.

Up to the present time trade has not been equal to 1912 and 1913, but there is an optimistic feeling among the lumber and planing mill men that business will gradually improve as the season advances, and we anticipate that there will be an average amount of building done during the coming year.

The prices of rough and manufactured materials will be about the same as they were last season. Collections have not been quite as good during the past year as they were in previous years, owing to the stringency in the money market, but conditions are improving and investors expect to be able to obtain money at reasonable rates of interest. This will help to stimulate the building trade.

There is still a good demand for houses of all kinds and the present rentals of house property yield good returns upon the investments. Under these favorable conditions we do not expect very much decline in the volume of building for 1914.—George Rathbone, Ltd.

Evidence of Good Business Ahead

Editor Canada Lumberman:

Toronto, Ont., April 1st.

We are pleased to say that while the volume of business for the first three months of this year is about twenty per cent. less than corresponding months last year, we feel that it is about as good as could be expected, when you take into consideration the late money stringency and the bad weather.

Since money has become a little easier, people intending to build have not yet had their plans completed. There is much evidence, however, of good business ahead.

So far as collections are concerned we have found ours good all

through last year and cannot complain so far this year. This is the case in general, except in one or two instances that did not amount to much.

So far as farmers are concerned, we have found that when they come to place orders for lumber they have their pockets full of money, and would just as soon pay when they order the lumber as after they receive it.

Building Trade Active at Strathroy

Editor Canada Lumberman: Strathroy, Ont., March 31st.

We have every prospect of a good year in trade in this neighborhood. There are quite a number of houses going up in the town and also in the surrounding country. The farmers around Strathroy are, as a rule, a wealthy class and those that have not good buildings on their farms are, I believe, in a condition financially to build. The farmers around here do not build unless they have the money to do so or at least the biggest part of it.

Prices of lumber are practically unchanged but, owing to the low price of yellow pine and also the bringing of hemlock from the United States into Canada hemlock has depreciated at least \$1.00 per 1,000 below what it was last year.—R. W. Nicholson.

Prosperous Season Expected at Welland

Editor Canada Lumberman: Welland, Ont., April 3rd.

Building permits at Welland, up to the present, are ahead of last year, or the year before. Carpenters generally report a prosperous looking season as for building. Dealers of all kinds report that business was about average during the winter, and collections the same. We would consider the farmers in the most thrifty condition they have been for years. There has been ready sale for all their products at good prices. Scarcity of labor for the farms is the serious drawback to the farmer, as most labor seems to want to centre in the towns and cities.—Goodwillie & Son.

A Satisfactory Outlook

Editor Canada Lumberman: Stouffville, Ont., April 2nd.

Business prospects for this season are very good, in fact very much better than we expected them to be. We have done more business this last March than in March, 1913. We may also say that collections are very good, and prices are the same as last year, but cannot just say if an advance will be made or not, as we have no definite prices given by the wholesalers.

On the whole the outlook is satisfactory, and we do not see any reason why we should not do more business than last season.—D. M. Heise & Company.

Good Outlook at Kingston

Editor Canada Lumberman: Kingston, Ont., March 30th.

The outlook for trade this spring is very good, and the volume of business done so far compares favorably with the last few years.

While collections have been a little slow during the last few months, we have every expectation that they will be better after the spring opens up.

The financial standing of our customers, we are pleased to say, is good, and we do not find any trouble in securing settlement of their accounts.—The Frontenac Lumber & Coal Company.

Expecting a Smaller Log Crop

Editor Canada Lumberman: Huntsville, Ont., April 15th.

We believe there are less logs of all description taken out in this district than in former years. Owing to the financial stringency in 1913 many mill owners did not operate in the woods during the fall and winter and, while mills which are operating may have somewhat larger stocks, the total output will be less. The first ten days of January caused a heavy loss to the operator as men and teams were in the bush immediately after Christmas, but could do nothing for want of ice and snow. Since January 10th we have had a very favorable winter for the hauling of logs in Muskoka and Parry Sound and we think the average cost of hauling would be 50c per M. less than usual.

It is a little early yet to write of the probable cut of lumber for the season 1914. The water in the lakes and rivers in this part of Ontario has not been as low for thirty years. The swamps have very little water in them and unless heavy rains fall there is a strong probability that millions of feet of softwood will not reach the mills during 1914. Even if the logs do reach the mills there is no doubt but that the amount saved in hauling will be lost in the drive and an additional cost incurred. Hundreds of drivers are now on the rivers and have been since April 1st. Owing to the backward spring they

cannot do anything but lie around and the drivers cost the lumber company about \$2.75 per day each.

Should we succeed in getting our logs down the streams we will cut this year about seven million feet of lumber.

The stocks will run about as follows:—Hemlock, four million; birch and other hardwoods, two million; spruce and pine, one million.

This is twenty per cent. more than we cut during the season of 1913 and applies equally to different varieties. The stocks in the mill yards in this section are very small and the inquiries are more numerous than for several years. We anticipate an unusually active year.—The Muskoka Wood Manufacturing Company.

A Good Cut of Logs, But Doubtful Driving Outlook

Editor Canada Lumberman: Chapleau, Ont., April 11th.

From the standpoint of getting logs out of the woods, the past winter has been the best that we have ever had. There has been just enough snow to make the work nice, and plenty of frost. Our output of logs and railway ties has been about 50 per cent. greater than any season we have had. The only other company operating in our immediate neighborhood is the Devon Lumber Company and from information we have received, their winter's operations have been equally successful. The timber cut in this section is chiefly Jack pine. Our own output is almost exclusively Jack pine.

Conditions for the drives are not at all favorable so far. There has been very little snow. The ice is very thick both in the lakes and small running creeks and the weather is keeping very, very backward. We are having some very fine bright days, melting the snow a little each day but freezing up at night just hard enough to dry it all up and keep the ice at its usual thickness. Unless we get fine warm rains a little later, it would look to us as though there will be difficulty in getting logs out of the bush.—Austin & Nicholson.

Encouraging Report upon Northern Ontario Conditions

Mr. A. P. Ebert, Huntsville, Ont., formerly of Wiarton, Ont., is covering the northern country for the Manufacturers' Lumber Company, of Stratford, Ont., both in a buying and selling capacity. Mr. Ebert visited Toronto on business recently and reports that logging conditions in Muskoka and Nipissing during the past winter were as good as they have ever been in any previous winter in his memory, so far as the facilities for taking out logs were concerned. The weather in the fall was good for cutting and skidding and when the snow arrived it remained a long time. Moreover, the snow falls were fairly continuous and made excellent sleighing. Weather conditions generally were favorable and operators had good roads all the time for three months.

The outlook in connection with driving operations, according to Mr. Ebert, is encouraging. From the experience of past years, he believes that, during the present season, there will be heavy rains, furnishing plenty of water for the drives. The snow practically all disappeared from the woods during the last week in March and the first week in April, but there was still, during the second week in April, a large amount of ice in the lakes, which could be counted upon to raise the waters in the rivers sufficiently for driving purposes.

The output of logs, as a result of last winter's operations, will probably be fairly extensive. This applies to softwoods, including white pine, Norway pine, hemlock, spruce and balsam. Stocks of hardwoods are not expected to be excessive, but are fairly plentiful. With favorable driving conditions, the quantity of logs taken out, he believes, will approach the output of an average winter of a few years ago.

Mr. Ebert reports that markets are steady, with prices unchanged, although the demand is not quite so good as was expected. The export trade of his company to the United States is fairly active.

Encouragement Increasing in B. C.

Editor Canada Lumberman: Grand Forks, B.C., March 20th.

The outlook for the year 1914 is very encouraging. Many signs point to a better condition in the lumber industry. There is an optimistic spirit taking root in the province of British Columbia. A large number of prominent men, who are in touch with the pulse of the times, feel that the worst of the present depression is over, and that future improvement will be rapid.

Reports from the prairie provinces indicate that large quantities of lumber will be required, and orders are now coming in without having to be pried loose. Firm prices seem to be general in nine-tenths of the manufacturers have decided that they must conserve their timber holdings, by securing a higher price for their product rather than a large volume of business.

All of the manufacturers in the Province have felt a great relief in the final settlement of the forest act. For years the matter of rentals and royalties has been a great worry and a heavy burden, and,

although the final settlement was not entirely satisfactory, it was decided that some settlement was necessary, in order to remove cause for worry and the enormous expense entailed.

There still remains, however, one serious menace to the mountain lumbermen, viz., American competition. The mountain lumbermen have been sorely tried owing to a large percentage of their output being common lumber, and the facility with which western United States manufacturers can absorb the market for common stock when prices fall off in the prairie states. There is no reasonable excuse for the dumping of American low grade stock, as holding the price firm does not mean an increased price to the consumer, principally owing to the large production from the Canadian coast mills. Firm prices, moreover, would give a steadying and more stable effect to the entire industry. The Dominion Government ought to look at this matter in a common sense way, and the fight against dumping will go on until some recognition of this greatest of industries is made.

Although optimism is the word in this glorious province, we do not expect a boom, nor do we want it. We expect that improvement will take place every year, until a high water mark is reached. In consequence, men in charge of large capital consider the present the opportune time to invest in British Columbia.—W. Mark DeCew.

Michigan Output Nearly Average

A despatch from Menominee, Mich., says: While the logging season in upper Michigan permitted getting out nearly as much timber as had been contemplated the same is not true of other large timber fields, and operators are predicting sharp advances in prices as a result. The advances may not come until July or later when the shortage will begin to be felt but it is believed firms with lumber to deliver in the middle of the season will be able nearly to dictate the price of select stock. Operators here have heard that in the Minnesota and Canadian lumber districts the logging season was shortened nearly seven weeks and that the output is much below the normal season. American lumbermen are said to have secured control of the bulk of the cut in Canada for the season just past, which will make it impossible for Canadian lumber to invade the American market to any extent affecting prices unfavorably.

Government Estimate of Ontario Output

According to a report issued by the Ontario Department of Lands, Forests and Mines, the cut in the woods of Ontario during the past winter was as follows:—Pulp wood, 225,250 cords; charcoal wood, 60,000 cords; railway ties, 5,500,000; pine, 350,000,000 feet, board measurement; spruce, 7,500,000 hemlock, 35,000,000; other varieties of timber, 75,000,000; hard wood (maple and birch), 5,000,000. The total figure last year for pine and other varieties was 552,525,898 feet, and this year the figure is 472,500,000 feet, board measurement.

Saginaw Valley lumber dealers are reported to have contracted for nearly 80,000,000 feet of pine in the Georgian Bay district, to be cut for delivery during the coming season of navigation.

Flywheels for Aiding the Motor

Referring to the article by E. E. D., page 41 of the Canada Lumberman of April 1st, it might be of interest to readers for me to state that it is practical to place a flywheel directly on a motor shaft instead of running a separate belt from the line shaft to an independent flywheel. Prof. Goodman, of England, recommends such motor flywheels in certain instances, and it can be easily shown that such design would be more economical than E. E. D.'s arrangement.

The best way to connect such a flywheel to the motor shaft would be by means of a clutch pulley. This would enable the operator to start the motor with the flywheel "off," and after the motor has attained full speed it can be gradually thrown in.

The principal thing to be careful of, in placing a flywheel on a motor shaft, is to see that excessive breaking stress will not be set up in the flywheel rim due to centrifugal force. This force is computed from the formula $C = WV^2/gR$ where C is the centrifugal force in pounds, W is the weight in pounds, V is the velocity in feet per second, $g = 32.16$ and R is the radius in feet. This formula shows that great velocity is a dangerous thing, whereas great radius is an advantage. That is the probable reason why E. E. D. used a separate drive for the flywheel. However, rather than a separate drive, I would have placed the flywheel directly on the line shaft, whose speed is doubtless lower than the speed of the motor, i.e., in revolutions per minute.

Of course, I do not want to say that E. E. D.'s arrangement is wrong, because he may have had the flywheel on hand, and wanted to use it. He therefore made the speed suit the flywheel, which is perfectly proper. But where a new flywheel is to be used, it is unnecessary to run it through a separate drive.

The energy stored in a flywheel is determined from the formula

$E = W V^2/2g$ where E is the energy in foot pounds, W is the weight in pounds, V is the velocity of the flywheel rim in feet per second, and g , as before, equals 32.16. 33,000 foot pounds per minute are equal to one horsepower.

From the two above formulas one should be able to determine the proper flywheel for almost any sawing purpose.

W. F. Schaphorst.

Will Pacific Coast Mills Slaughter Eastern Prices?

Chase, Talbot & Company, 29 Broadway, New York, in their lumber market letter under date of April 1st, say:—The subject mostly discussed in the lumber trade, and that which will soon prove of greatest importance, is the matter of just how conditions are to be adjusted, to admit to eastern markets Pacific Coast lumber products. Unquestionably, Pacific coast lumber and timber will be marketed on the Atlantic in unknown volume after the opening of the Panama Canal, which Colonel Goethals promises to be not later than early in July. The eastern and West Virginia spruce manufacturers, as well as the producers of southern pine lumber and timber, cannot be expected to retire forthwith from the markets they have heretofore enjoyed. Furthermore, a point worthy of serious consideration is the fact that slaughter prices will not and cannot produce increased consumption sufficient to admit of calculation.

Those lumbermen whose opinions are most sought are a unit in the firm conviction that permanency, with the least revolutionary adjustment of the necessary changes in trade conditions, can be accomplished only through organization. We have long since awaited the announcement that important interests on the Pacific coast had combined with some well-established Atlantic coast corporation or corporations, with the object of an intelligent disposition among an established clientele, of a large portion of Pacific coast shipments.

It seems that almost every producer, large and small, is going in "on his own hook," and a great many so-called lumber salesmen are offering the stock. If added emphasis is needed to convince an individual that he is not a salesman, it is to be conscious that he has offered stock to a prospective buyer at a lesser price than the buyer anticipated paying. This fact is true in numerous instances of recent offerings of Pacific coast timber on this market when blanket prices of \$21 per M. delivered on dock this port, have been quoted, with buyer's privilege of making out a dimension specification in sizes and lengths to suit himself. \$4 per M. in excess of this figure would suit the buyer as well and still equal or be under the quotations on competitive stock.

Are the Pacific coast manufacturers not satisfied with the competition they have to meet in Atlantic coast stock, or is it their further object to cut every cent of possible profit out from under each other?

For more than half a century we have fought to maintain and advance the prices of lumber, but now venture to predict with a word of caution, that if the indecisive, haphazard, go-as-you-please methods continue (granting, of course, that any considerable volume of business is transacted) a lower range of prices will prevail in the eastern markets after July 1st than has been known in the last double decade. Co-operation is imperative if the evils forecasted are to be avoided.

Ontario's Large Lumbering Investments

Hon. W. H. Hearst had occasion recently, in explaining the proposed purchase of the Pembroke Lumber Company's limits for \$185,000, to make an interesting reference to the lumbering industry in Ontario. The Department of Lands, Forests and Mines, he said, was already the first on the list of revenue producers. In 1890, the total capital invested in lumber interests in the province amounted to only \$74,000,000. Today the total was \$260,000,000. "There is no other industry or group of industries," he said, "which has as much capital invested in this province or which employs so many men. The nearest approach is the capital invested in fruit stock, which reaches \$133,000,000. Wages paid in the lumbering industry in Ontario during 1913 amounted to \$39,000,000." The value of timber used in Ontario annually amounts to about \$20,000,000. Most of this was cut and manufactured in the province. In addition to being a thriving industry on its own merits, lumbering helped the farming community. Last year over \$2,500,000 worth of farm products went into the lumber camps as supplies. Ontario ranked first among the timber producing provinces of the Dominion, with a total of 32 per cent. of the whole output, and the largest average selling price in the Dominion, namely, \$19 a thousand feet. The area now under timber license was 17,915 square miles. Last year the product of pine had been 254,000,000 feet and the timber dues collected amounted to \$1,759,169. Railway ties alone had brought in \$492,750.

Great care was being taken of the forests. Last year \$325,000 had been expended for fire rangers. The government was also taking steps to equip these rangers with the best fire fighting apparatus.

Death of Frederick Weyerhaeuser

The death occurred at Pasadena, Cal., on April 4th, of Frederick Weyerhaeuser, the multi-millionaire lumberman, of St. Paul, Minn. Mr. Weyerhaeuser was 79 years of age and died of pneumonia resulting from a cold which he contracted on Sunday, March 22nd.

Mr. Weyerhaeuser's connection with the lumbering industry in the United States was more notable probably than that of any other single man and his business career was one of the most interesting in all the annals of lumber history. He was born in Germany in 1834 and the family came to America in 1852. Frederick Weyerhaeuser went west to Rock Island, Ill., and became a retail lumber dealer in 1856. In 1860 he purchased a small sawmill at Rock Island and commenced his career as a manufacturing lumberman. He then began to purchase timber in Wisconsin, a business policy which he continued throughout the rest of his life. Today, throughout the south, the middle north and the far west, there exist a great number of businesses known as "Weyerhaeuser Interests." He was a remarkably successful organizer, although not an actual promoter. His personality was striking and remarkable. Honesty, wisdom and sound judgment were his chief characteristics. He never sought for publicity, and for this reason was probably one of the least known men of wealth of his time. In his private life he was a man of noble Christian character. He lived simply and unostentatiously. His passing away deprives the lumbering industry of the United States of probably its greatest, most successful and most widely respected member.

Death of Henry H. Gibson

Henry H. Gibson, president of the Hardwood Record Company, publishers of the "Hardwood Record," of Chicago, and editor and manager of that periodical, died of heart disease on March 25th, at the age of sixty years. Mr. Gibson had endeared himself to all with whom he came into business or social contact and had established for himself a reputation as an authority upon timber second to none in the United States.

Probably the most notable achievement of Mr. Gibson's business career was the compilation of a remarkable series of articles describing in minute detail the scientific and economic facts regarding every commercial tree of the United States. This work was started in the form of a series of articles which were begun by Mr. Gibson shortly after commencing the publication of "The Hardwood Record." About a year and a half ago the series was compiled in book form under the title of "American Forest Trees," which will stand for all time as a fitting monument to his memory and as one of the highest authorities upon the subject with which it deals.

Valuable Information for Belt Users

A great deal of interesting information regarding leather belting is contained in the latest catalogue, No. 5, issued by the Graton and Knight Manufacturing Company, Worcester, Mass. The catalogue is handsomely published on excellent paper with stiff brown cover and contains many splendid illustrations. Information is included regarding mechanical belting rules, the care of belting, belting tables, etc., part of which we reproduce, knowing that it will be valuable to many readers.

Our first suggestion, the catalogue says, we believe to be fundamental. It is that the care of the belting shall be entrusted to one man, that he shall be held solely and fully responsible for it, that no repairs or alterations of any sort shall be made nor any dressing be applied except by him or under his immediate direction. No factory is so small and none so large but that this arrangement is a necessity. It is a necessity for a variety of reasons. In the first place it makes some one man responsible for the belting, thereby insuring that it receives attention when needed and not when it is too late, for the "stitch in time" is eminently true in the care of belting, and what is any man's business is no man's business. Secondly, it insures, as far as may be, uniform treatment of the belting, a powerful factor in determining its efficiency and life. Thirdly, it makes possible a full record of the efficiency, repairs, term of service, etc., of the individual belts—a matter of vital economic interest.

It is desirable to place in charge of the belting a man who has been trained in one of the factories where belting is made, and who has had a wide experience in the manufacture and care of belting. When this is not practicable, the man selected for the position should be given a short course of instruction either in a belt factory or under a competent belt mechanic, this instruction to cover the proper care of leather, the making of laps, the taking up of belting, ordinary repairs, etc. Each factory should, of course, be provided with the necessary equipment for doing all ordinary belt work, the outfit required being neither very elaborate nor expensive.

It should be the duty of the belt man to make a careful and systematic inspection of belting at definite, rather frequent intervals,

and keep a record of the same. The inspection should be made to ascertain if any of the following conditions exist:

First—Whether belting is over-dry or saturated with oil.

Second—Whether afflicted with an over-dose of belt dressing.

Third—If any laps have begun to open.

Fourth—Whether the belting is too slack and is slipping unduly.

Fifth—Whether the shafting is in line or if a guide has to be used to keep the belt on the pulleys.

Sixth—Whether the belt is so badly worn as to be in need of early replacement.

How to Remedy Some of the Belt Troubles

When belting appears the least bit dry or harsh, the belt should first be carefully cleaned of surface dirt. This usually may be accomplished by rubbing with a cloth—damping the cloth with kerosene is sometimes of assistance. In bad cases a wooden or metal scraper may be necessary to remove accumulated dirt, but in any event a clean leather surface should be obtained—this should then receive a light coat of dressing on both sides of the belt. This first light application should be allowed to work in thoroughly before more is applied. The applications should be repeated until the leather has that mellow but not greasy feeling characteristic of proper working condition. In cases where belting is exposed to moisture, or where it is accidentally wet, or particularly where the belt works under such conditions that it is first wet and then dry, a little attention in the way of wiping off surface moisture, and applying a light coat of dressing to the still damp belt will work wonders in the way of increasing its life. The sticky belt dressings are usually to be avoided. In rare instances they may be immediately useful, but if used to any extent they stick the belt to the pulley so tightly that the grain is pulled off the belt, or, working into the leather, they rot it and shorten its life.

By keeping simple records and following the foregoing instructions for a period of three years, a large saving in the annual belting expense has been effected, in some instances as high as 50 per cent. This included only the first cost of the belting, labor and material used. Were it possible to estimate the increased output of machines due to more continuous operation without breakdowns, the results would be still more remarkable.

In order to assist belt users in effecting savings of this nature by the use of the best quality of belts, the Graton & Knight Manufacturing Company have had prepared in their engineering department several belt record systems to meet different requirements. These systems vary according to the size and kind of factory, number of parts used, etc., and by their use every plant, large or small, will be greatly benefited.

Avoid Oils, Greases, etc.

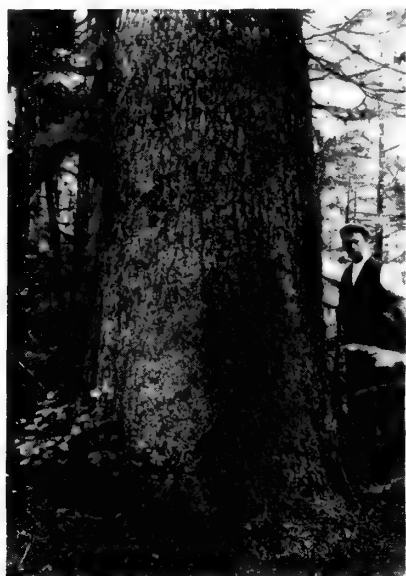
On the subject of care of leather belts, the catalogue says:—Too much grease is injurious to leather. Mineral oils in particular rot leather very rapidly, and where belting is liable to become soaked with oil, mechanical means should be taken to keep the oil from the belt. Where this is impossible the belt should be removed from time to time and the oil extracted with some solvent such as naphtha or carbon tetrachloride. Packing the belt in dry sawdust or shavings or some similar absorbent material will sometimes answer the purpose. If it is not possible to remove the belt, wiping it while on the pulleys with a dry cloth or waste or some absorbent material will help. Machine oil, besides its tendency to rot leather when present in excess, gives a bad frictional surface, leading to excessive slipping. An excess of oil also has a tendency to injure the sticking qualities of the ordinary cements used in making belting. Frequently, from this or other causes, laps start up at the points, a result sometimes due to running belting in the wrong direction. All belting should be run so that the point of the lap on the outside surface of the belt points opposite to the direction in which the belting is run. To whatever cause the trouble may be due it should be given early attention.

In the case of oily belts it will be necessary to degrease the parts to be joined together or the cement will not stick satisfactorily. Do not think you are repairing the trouble if you drive a string of tacks through the joint. This is simply making a bad matter worse, for the leather will probably break where you have applied the tacks. There is a right and a wrong way of repairing laps as well as of lapping the ends of a belt together when first installed, and the quickest and easiest way is by no means the most economical in the end. It is very easy to drive a heavy cast iron belt fastener into a piece of leather, but it is just as well, before doing so, to think how much you will weaken the belt at that point, and how much service you will lose from your machine by the jump of the belt every time that chunk of metal goes around the pulley. The most satisfactory method of jointing belting is by making a cemented lap or joint. This is a surprisingly simple process once a man knows how; and given the man and the training advised, there is no reason why nearly every belt in a factory should not be joined together in this way.

The Commercial Importance of Spruce

Canada's Most Important Timber Tree Providing Over Two Billion Board Feet of Logs Annually—Fourth of a Series of Articles on Canadian Woods

By R. G. Lewis



Sitka Spruce with Buttressed Base.

If we consider the quantities of spruce sawn into lumber; consumed for pulp manufacture; exported as raw pulpwood; purchased for railway ties and poles; manufactured into cooperage stock; and used in the round in mining operations we have a total of over two billion board feet of spruce logs removed from the forests of Canada in a single year. That this is a conservative estimate can be readily seen by the fact that the quantities of spruce used for firewood, fencing, piles and rough railway and other construction work are not included in the above figures. This would indicate clearly that spruce is Canada's most important timber tree.

The use of spruce for pulp manufacture in Canada in the last few years has increased enormously with the rapid growth of this industry.

The wood has the long, tough, colourless fibres which are necessary for a good pulpwood and in addition is remarkably free from resin for a coniferous tree. These qualities will probably insure it a place in pulp manufacture in spite of the increasing use of substitute woods.

Spruce is not well suited for mining timbers as it is not durable in damp situations. This lack of durability also detracts from its value for railway ties and for poles. An economical preservative treatment which would protect spruce ties, poles, and props from decay throughout their mechanical life would add considerably to their value for these purposes.

The use of spruce for lumber has increased greatly in the last few years, with the increased scarcity of white pine; a wood which spruce closely resembles. For rough dimension lumber spruce has practically taken the place of white pine in the Canadian lumber market.

Five Distinct Species of Spruce

There are five distinct species of this tree in Canada all of which are used commercially.

White spruce (*Picea canadensis*) is probably the most important in point of quantity, as it is found in every province of the Dominion. It is not common in Nova Scotia, but is the most important timber tree in Quebec, Ontario and the three prairie provinces. It is undoubtedly rare in British Columbia.

The greatest quantity of white spruce lumber is sawn in Quebec and the total for 1912 for this species in Canada was probably in the neighborhood of 1,050,000,000 feet.

The wood of white spruce is light in weight and colour. It is soft, stiff, moderately strong, and tough. It has a fine even straight grain, is easy to work and hard to split. The lumber seasons well, holds nails well, is tasteless, odorless and non-resinous. It resembles the soft pines in many details, but is lighter in colour, has a finer grain and is less durable than white pine. The wood of white spruce is the lightest in colour of all the spruces.

Red spruce (*Picea rubra*) is the most valuable of all the eastern species on account of its fine texture and satiny lustre. The wood is very similar to white spruce, but is darker in colour with a distinct reddish tinge and is usually considered to be stronger. This tree is found in Nova Scotia, New Brunswick, Prince Edward Island, Quebec and Ontario.

The fine grain of this wood is due to its slow growth. It has been said that it takes this tree from two hundred and fifty to three hundred and fifty years to reach an average diameter of thirty inches.

In Eastern Canada the red spruce is seldom recognized by the lumberman and many of them deny its existence. The tree is often confused with black spruce (*Picea mariana*) and sometimes even with white spruce (*Picea canadensis*) although the three species are easily distinguished by the size and shape of their flowers and cones.

Canada cut approximately 200,000,000 feet of red spruce in 1912 compared to 860,000,000 feet for the United States.

Black spruce (*Picea mariana*) is a distinctly northern tree and with the tamarack is found further north than any of the other tree

species of America. This tree probably reaches its greatest development in Northern Manitoba and North-western Ontario.

As a general rule, black spruce does not reach a sufficient size to be important as a lumber tree. The tree is confined to poor soils and cold damp situations and grows very slowly. Its lumber is consequently stronger than most other spruces on account of this slow growth. The wood is usually harder than that of the other spruces and is considered to be the most durable species.

In the coal mining districts of Nova Scotia, where spruce and fir are the only mining timbers available, specifications for pit booms call for black spruce exclusively. Props and pit ties may be of white or red spruce or of balsam fir. Experience has shown that booms of this material outlast those of the other spruces when placed in damp situations.

In Canada the cut of black spruce lumber would approximate 40,000,000 feet a year and that of the United States would be less than 25,000,000 feet.

Sitka spruce (*Picea sitchensis*) also called tideland spruce is the most important spruce species of British Columbia. In this province the tree is confined to the western slopes of the Coast range. It reaches its highest development on delta lands on the coast of Washington and Oregon. It usually grows to a height of a hundred feet and a diameter of three to four feet above the stump, and is noted for its heavily buttressed base. The wood of Sitka spruce is the softest of that of the spruces and is also the lightest in weight and the darkest in colour, being a pale brown with a faint reddish tinge. It splits easily and has a satiny lustre similar to that of red spruce but is otherwise very similar in its general characteristics to the other spruce species. Being the largest of the spruces its wood is most valuable on account of the large dimensions in which it can be obtained and the large percentage of clear lumber it produces. The tree grows rapidly as is indicated by its soft lumber and is a very long-lived species. Trees have been found from 4-6 feet in diameter and from 150-180 feet in height which were from 450 to 750 years old.

Engelmann spruce (*Picea Engelmanni*) is the typical Rocky Mountain spruce of Alberta and British Columbia although its range spreads out to the southward and includes the interior mountain ranges as far south as New Mexico and Arizona. In Canada this tree is found on the east slope of the Rockies in the Yukon Territory and spreads into British Columbia south of the Peace River although it is not found beyond the eastern slopes of the Coast Range. It reaches its highest development in south-eastern British Columbia where trees a hundred and fifty feet in height and 4-5 feet in diameter are quite common.

The wood is light, soft, fine and straight grained and is a light yellowish colour with a faint reddish brown tinge. It is sawn in considerable quantities in the Mountain mills and sold under the name of Mountain spruce.

As a general rule this tree does not produce lumber of as large dimensions as Sitka spruce although its percentage of clear grades is probably quite as high. The annual cut of this material is probably in the neighborhood of 50,000,000 feet in British Columbia as compared to 33,000,000 feet in the Western States.

The lumber of these five species is usually sold simply as spruce and where more than one species is cut in a district the lumber of each species is not kept separate.

Spruce As a Building Material

Spruce lumber in Canada is used in greatest quantities by the manufacturers of building material. It is popular for this purpose not only because of its cheapness and abundance and the fact that it can be obtained in all dimensions but because of its physical qualities. The most important of these qualities are its softness, lightness and uniform structure which produce a lumber that takes paint well, is easily worked and which "stands up well" or holds its shape with the minimum of shrinking, warping or swelling.

In Ontario, where white spruce forms a greater part of the spruce lumber on the market, this wood comes third on the list of woods used for the manufacture of sash, doors and house trim, forming 10 per cent. of all the wood used in this industry. The greatest quantities of spruce are used for siding, flooring and roof sheathing. Spruce is used also for framing and interior finish but hemlock makes a stronger frame and pine is more suitable for decorative work and for sash and doors.

In the Maritime Provinces where pine and hemlock are not so abundant, spruce is the most important wood used for building material and forms 60 per cent. of the total quantity used. This lumber

would be chiefly red spruce. In Manitoba and the Prairie provinces spruce is the most important building material and the lumber used is white and black spruce only.

Spruce is used in the manufacture of boxes and for crating material to an enormous extent in Canada. The wood has particular qualities which fit it for this purpose. It is tough, light and strong, holds nails well and is odorless, tasteless and non-resinous. Its light color makes it attractive in appearance. Its lack of taste and odor fit it for food containers and its toughness recommends it for crating.

Economical Use in Box Factories

Many of the larger, more complete, sawmills have box factories in connection, which utilize slabs, edgings, trimmings and cull material for box shooks. This practice effects an enormous saving in raw material and results in increased profits to the mill owners. Many large concerns are engaged in manufacturing box shooks exclusively, sawing their own logs and shipping the finished product in the knocked-down form ready to be assembled by the final users. Many firms located in the larger cities buy finished lumber or box shooks and merely assemble these for the users.

The use of spruce for cooperage is steadily increasing as the local supply of elm and oak decreases. In the Maritime Provinces spruce is the most important wood for this purpose and it seems to be a fairly satisfactory substitute for elm. It is specially valuable for barrels to contain dry fish, fruit and other food stuffs. Large quantities of tight cooperage stock are also manufactured. The wood is valued in this industry for its strength in comparison to weight, and its toughness and lack of taste or odor.

In the manufacture of railway rolling stock, spruce is used only because it is a cheap material, with the requisite strength and toughness for siding and flooring in freight cars. It is used for lining refrigerator cars because of its lack of odor.

There are many purposes for which spruce lumber is used which do not depend on any of its finer qualities but merely on the fact that it is cheap, light in weight and fairly strong and tough. These uses, in addition to those already mentioned, include the use of this wood in the manufacture of boats, vehicles and implements, furniture, fixtures, machinery framework, coffins, shells, and foundry flasks.

In many instances spruce is preferred to other woods on account of its lack of taste and odor. Its uses in this connection, in addition to boxes, cooperage and refrigerator cars, include doors and lining of refrigerators and cold storages, kitchen tables and cabinets, silos, wooden water pipes, woodenware which comes into contact with food such as butter working tools, bread boards, meat boards, etc.

When the spruce grows in close stands in the forest, it develops a long, slender, tapering bole, free from large branches for the greater part of its length. This habit of growth together with the lightness and toughness of the wood, produces an ideal material for the spars of vessels. In addition to the large quantities of spruce lumber used in building the hulls, many selected trees are felled and made into masts, yards, booms and bowsprits.

Spruce can be used in large dimensions with greater safety than most woods. Not only is the wood remarkably free from defects, but these defects, when present, show in the surface and there is little danger of a well selected spar failing through some hidden defect.

Well Adapted for Special Uses

This same quality together with an unusually straight grain makes spruce a favorite wood for the manufacture of cars and paddles. The long, light, carefully proportioned and balanced sculls used in racing boats are made exclusively of spruce. No other wood has the lightness and strength together with the uniform structure and straight even grain. Manufacturers of these products in the east have great difficulty in obtaining stock of sufficient size for the best class of sculls and many of them import selected sticks of Sitka spruce and Engelmann spruce from the Pacific Coast for this purpose. As a general rule two sculls can be made from a well selected 3 in. x 19 in. plank, 14 ft. long.

One of the most distinct characteristics of spruce wood and one which it does not share with any other wood to an equal extent, is its resonance. For the manufacture of sounding-boards in pianos, resonance is an essential quality and spruce is usually demanded for this purpose. Its quality of prolonging and increasing sound vibrations is a remarkable one and is due chiefly to its uniform structure. Trees growing under unfavorable conditions whose annual growth rings are narrow, produce the best quality of wood. Consequently lumber from high altitudes is in greatest demand. Wide stock is imperative and old trees of large size are greatly sought for. The wood must be carefully selected, seasoned and manufactured and the percentage of waste is very high. For many years the red spruce of the Atlantic Coast was preferred by organ and piano manufacturers on account of its fine, even grain but Sitka and Engelmann spruce from the Pacific Coast are now used in greatest quantities as they can be obtained in greatest dimensions free from defects.

Organ pipes, bellows, swell-boxes, wind-chests and ribs are also made preferably of spruce as are the ribs of pianos and such small instruments as guitars, mandoline, zithers, etc.

In addition to these more important uses, spruce is purchased in small quantities by the manufacturers or many other commodities. Often it is used only because it is cheap and abundant and often because its use has become a habit. Some of these uses are peculiar and worthy of mention.

Spruce has been reported, both in Canada and the United States for the manufacture of bobbins, camera boxes, vent plugs, faucets, and bungs for barrels, flag-staffs, vaulting-poles, Indian clubs, windmill slats, ladders, scales, wash-boards, cross-arms, automobile flooring, excelsior and wood-wool.

It is sometimes used for core-stock for veneered products and for the rims of wooden pulleys, as it glues up well and holds its shape. Spruce makes excellent veneer that does not split on drying and can be used to advantage for baskets, berry boxes and plates as well as for built-up veneered products.

Framework for Aeroplanes

One of the most exacting uses to which this wood is put is in the manufacture of certain parts of the framework of aeroplanes. Toughness, lightness and straight grain can be obtained in other woods but none of these are as free from hidden defects as spruce. When the life of the aviator depends on the reliability of each separate part of the flying machine it is necessary for the designer to select materials whose qualities are well understood.

The "struts" or upright posts which separate the planes in a bi-plane and those parts of the "fuselage" or body framework of a mono-plane which are in compression are always made of this wood. The bent ribs which give the mathematical exactness to the curve of the planes themselves, are made of thin strips of straight-grained spruce, glued together to insure permanency of form and to give the greatest stiffness possible in relation to size and weight. The beams or sills which run the entire length of the machine are made of single pieces of spruce in which the grain must run absolutely straight for the entire length of the piece; often sixteen feet or more. Other woods are used in aeroplane construction but spruce is practically the only wood used for the framework.

Spruce will grow in almost any kind of soil and under varied conditions and has long been a favorite tree for reforestation. Some of the species are of very rapid growth under favorable conditions while others take many years to reach maturity. Precise figures of the growth rates would be of little value in a general description of this nature, but it might be safely said that spruce does not grow as rapidly as white pine or, in fact, any of the native pines of Canada. It is particularly well adapted for planting in close stands as it will endure the maximum quantity of side-shading. Young trees will endure over-shading for fifty years or more, under stands of other species and when released by their removal, will grow rapidly and reach maturity.

Lumber Company Loses Law Suit

Judgment was recently given by the Court of Appeal in the case of the Northern Crown Bank of Winnipeg against the Great West Lumber Company. The decision was in favor of the bank. The case involved a sum of approximately \$600,000. The action arose through a denial on the part of the lumber company of its liabilities to the bank which had made large advances to the company. The company alleged that when these advances reached a certain sum, the bank took an active part in the conducting of the business, to such an extent that the lumber company was relieved of responsibility for any loss which might have been incurred. At the first trial, Chief Justice Harvey decided in favor of the lumber company.

Barbados Market Report

S. P. Mussen, Son & Company, Barbados, report under date of March 27th as follows:—Lumberstuffs.—White pine.—There have been no arrivals in this class of lumber during the fortnight, but dealers' yards are fully stocked. Spruce.—No receipts, but we have sold a cargo to arrive, which is now about due. Pitch pine.—No receipts, but the cargo ex "Ethel Clarke" mentioned in our last, keeps the market amply supplied. Shingles.—There have been no receipts of either Gaspe or cedar laying during the fortnight.

Five Thousand Facts About Canada

The 1914 edition of "5,000 Facts About Canada," compiled by Frank Yeigh and published by the Canadian Facts Publishing Company, 588 Huron Street, Toronto, contains in concise and very interesting form a remarkably varied assortment of important information regarding Canada and its many industries. The book is, in fact, a mine of information and contains all the essential facts relating to Canada's progress during the year 1913. Copies may be had from the above address for 25c each.

Electric Drive in the Planing Mill

Advantages of Separate Motors Clearly Demonstrated—Rehandling of Stock Reduced to a Minimum—Equipment of Most Modern Type—Description of Operation

By E. J. Barry, Assoc. A.I.E.E.*

The inherent advantages of electric drive are well illustrated in the latest addition to the list of planing mills of the Pacific Coast. In June of last year, the St. Paul & Tacoma Lumber Company of Tacoma, Washington, placed in service their new planing mill, equipped with the latest and best devices for the production of finished lumber. During the previous year, their old planing mill and one of the sawmills were destroyed by fire, and it was then planned to build the best mill on the Coast. Whether this laudable ambition has been realized is left for others to judge; but there is no question that the mill is a model of its kind, and a striking example of modern design and practice. As may be seen from the illustrations, the mill is solidly built and well equipped with sprinkler system and standpipes, as fire protection. The interior is coated with whitewash as a further preventive, while the extensive blower system prevents the accumulation of shavings and sawdust, which if allowed to remain constitute a fire risk.

Each machine is driven by a separate motor, the absence of line shafting being highly appreciated. The total output of the planing mill is 300,000 feet every day of ten hours, and the total connected load amounts to 1,192 horse-power.

High Efficiency of Equipment

As money is made or lost in the re-handling of lumber, every effort is directed to reduce this factor to a minimum. The fast feed planers are equipped with feed tables which operate much on the principle of a repeating rifle. The table is loaded with boards which are shot through the planer as fast as the machinery will operate, that is to say, up to a speed of 250 ft. per minute.

The paving block machine is the first on entering from the south end of the mill, and is driven by a 75 h.p. motor. There are 15 saws of 25-in. diameter mounted on the arbor, spaced 4 in. apart. A conveyor driven by the same motor carries the block material past the saws, which cut them into the well known shape of paving blocks. The blocks drop into a conveyor which loads steel cages mounted on wheels, and the cages are then transferred by electric locomotives to the creosoting plant, and after treatment there, are ready for shipment. The capacity of this machine per day is from 75,000 to 100,000 blocks.

The next machine is a 20 by 16 in. Berlin surfacer, driven by a 1,200 r.p.m. 50 h.p. motor. Heavy timbers for building construction are handled by this machine. Next to the surfacer is a rip saw driven by a 15 h.p. motor. This saw gets through a lot of work in a day.

*Mr. Barry designed and installed the entire electrical equipment for the St. Paul and Tacoma Lumber Co., which is described in this article.

How Individual Motor Drive in a Large Planing Mill has provided maximum efficiency at minimum operating expense.

A Fay & Egan gatling gun moulder is the next in line, turning out mouldings. 20 h.p. is required for this operation.

Next comes a No. 108 Berlin Moulder for heavier material taking a motor of 35 h.p.

After the moulder is a 64 in. re-saw, driven by a 50 h.p. motor. This machine is kept very busy.

The next machine is a combined re-saw and matcher, as shown in illustration, which has given excellent service. Here, as in all industries where it is possible to combine two operations in one, the cost of production is cheapened to that extent. Various kinds of lumber call for surfacing on one side only, so the material is planed top and bottom, and resawn as it passes out of the machine. A 50 h.p. motor is used for the matcher and a like one for the re-saw. The motor for the planer is direct connected, but a silent chain drive is used on the re-saw to allow a 2½-in. movement of the heads. The automatic electric release of each driving motor is so connected that a mishap to one will throw the other out, thus obviating the danger of the planer driving the lumber at full speed against the saw when its motor has stopped.

Two 15 by 6 Berlin planers follow, driven by 75 h.p., 1,200 r.p.m. motors.

Next in line is a 9 by 6 Berlin machine driven by a 50 h.p. motor, and following respectively, a Fay & Egan planer and an S. A. Woods planer, both 15 by 6 and driven by 50 h.p. motors of 1,200 r.p.m.

Attached to each of these planers and driven by 15 h.p. motors, are profilers to cut various grooves and beadings in the finished lumber.

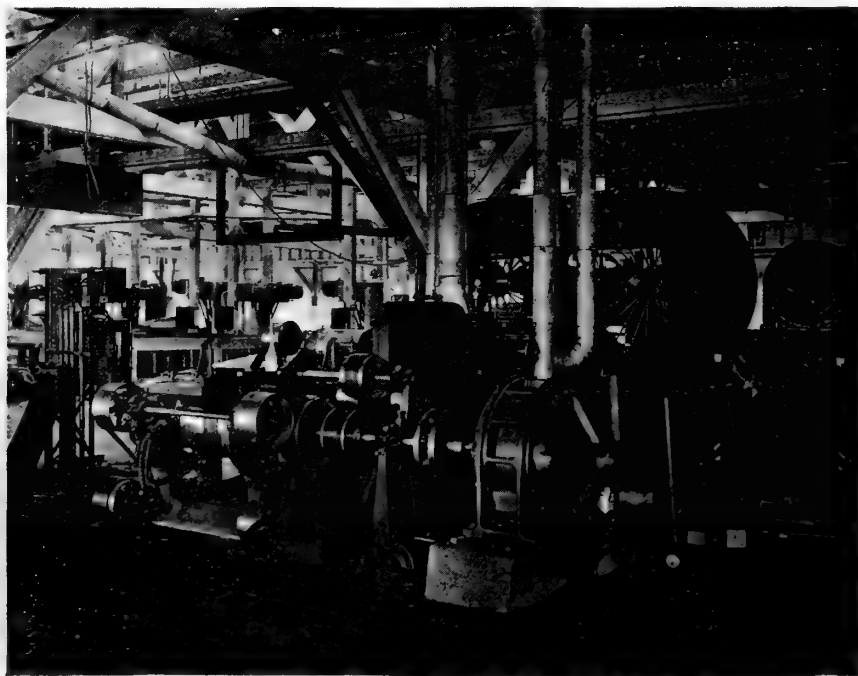
As the lumber passes through the planers it is trimmed to the proper lengths by small swing saws, of which there are 16, driven by individual motors of three horse-power each. These are shown in the illustration.

The cuttings from the trim saws drop down a chute into a motor driven conveyor, which carries them to a hopper outside the mill, for disposal. The lumber, cut to proper dimensions, drops on a moving belt conveyor, and is taken to the grading table. After sorting, it is loaded on cars ready for rail or water shipment.

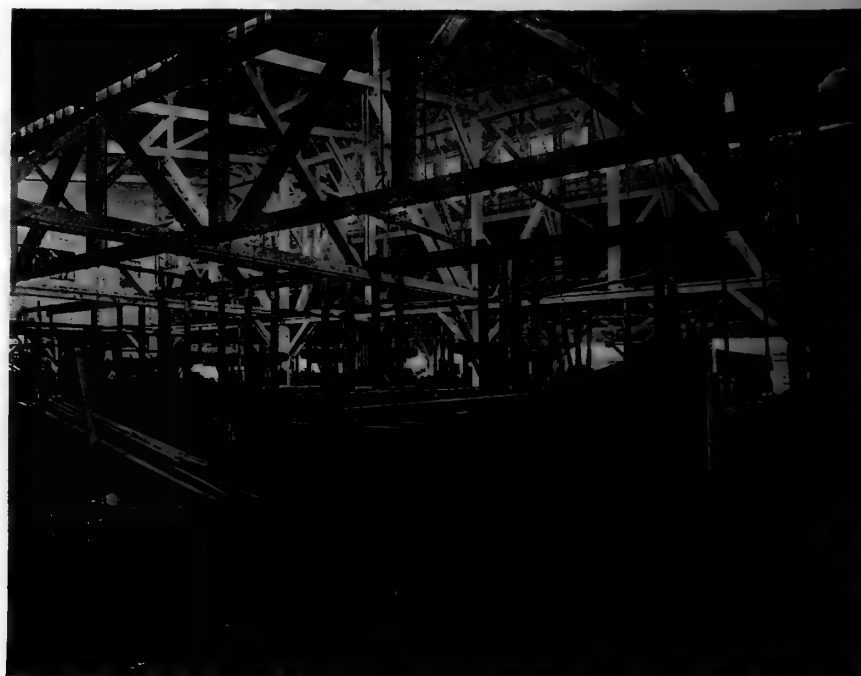
The blower system is driven by two 150 h.p. motors, and a suction pipe is brought to every outlet, for the disposal of refuse.

The Wiring System

The wiring throughout is contained in galvanized iron conduit, for both power and lighting circuits, with the object of securing fire-proof and mechanically and electrically sound construction. A 1,000 kilowatt General Electric Curtis turbo-generator supplies energy at a pressure of 440 volts for power. For lighting, the pressure is stepped



Combined Resaw and Matcher Electrically Driven



Trim Saws and Lumber Conveyors with Electric Drive

up by transformers to 2,200 volts for transmission and is stepped down to a working pressure of 220/110 at the building.

The power service is brought in at the south end of the mill, and consists of four 350,000 c.m. rubber covered cables arranged in multiple, twelve cables in all. The conduit is carried under the floor wherever practicable, and care was taken to install it with a view to good appearance as well as utility.

The main feeders supply two panel cabinets designed by the writer, and built by Evans Dickson Company of Tacoma.

The bus bars are accessible from the rear, leaving the fuse mountings in the front of the panels, clear of cables. In operation, the doors at front and rear of cabinets are kept closed, and the insides of doors are lined with asbestos over the steel to prevent arcing trouble, in case a fuse should be jarred loose by any means. The fuses are readily accessible to cut a circuit out of service, should such be necessary, without in any way interfering with the operation of other machines.

Overload relays have been placed on each motor as protection against overloads, and when properly installed and given a reasonable amount of attention, they form an ideal method of protection. One can tell at a glance if a relay has been tampered with, but a re-filled fuse of heavy capacity may give fancied security. The annoyance of a motor continually cutting out will soon cause the operator to report to the proper quarter, and so give the opportunity to prevent damage to the machine as well as the motor. Then the temptation to replace a fuse with a nail or a handy strip of metal, is well known to anyone experienced in industrial power work.

Ingenious System of Signals

A planing mill in operation is not the quietest place in the world, and a signal system has been devised to insure that the machines receive attention when required. When an operator wishes to call a machinist to make repairs or alterations, he steps to the nearest post and switches on a red light, showing on the glass the number of his machine. He then pulls the cord of a whistle operated by compressed air, and the machinist has only to look at the signal light to discover where he is wanted.

The lighting throughout is by means of metallic filament lamps of from 60 to 250 watt capacity each, and the control is from the filing room located above the planing mill floor.

Individual lights and pilot lights are supplied from a separate distribution board, while the general lighting is controlled by 6-50 ampere triple pole switches, controlling lighting panels distributed through the mill.

The lighting system is entirely separate from the power, so that an accident to the power feeders would not leave the mill in darkness. This also ensures a better and more steady voltage, at the lamps.

At all points electricity has proven its efficiency in planing mill work, particularly in the manner in which it is possible to keep the speed of production at the desired level, especially where individual drive is used. A machine at any point may be started up without the necessity of running the cumbersome transmission line shafting and belts, which engine drive involves. Electricity is clean and changes and extensions are easy to make.

President E. G. Griggs of the St. Paul & Tacoma Company has long been an advocate of electric drive, and the electrical profession

has reason to appreciate the efforts of such progressive men, who are willing to take the initiative in pioneering, in what is, comparatively speaking, a new field for the utilization of electrical energy.

Quebec to Open New Pulpwood Areas

Quebec, April 3.—Departing from the rule which has been observed for eight years, the Quebec Government has decided to open new districts to lumber and pulp industries and will auction off limits in the Abitibi and Lake St. John districts during the months of August and October. In the Lake St. John region the territory to be opened is north of the lake and in the basin of the Mistassini and Rat Rivers. In the Abitibi it is situated south of the Transcontinental, but on the north slope in the basin which empties into James Bay. This tract is traversed by the Poisson, Blanc, Harricana, and Belle rivers. Both limits have been most carefully surveyed by the Forestry Service. These concessions will call for the development of the water powers in the districts and will carry the obligation to construct pulp mills of a specified capacity within three years. The delay between now and August is to allow opportunity for exploration and permit of advertising the proposed auction, not only in Canada but also in the United States, Great Britain and France, as the government wishes to attract the attention of foreign capitalists to the great natural resources of the province. The government has appointed five official guides to further the interests of colonization.

Reasons for Free Entry of Novelty Siding into U.S.

A report was recently published in the Canada Lumberman, of the decision of the United States Treasury Board in regard to the duty upon "novelty siding" entering that country from Canada. It will be recalled that after a reference to the Treasury Board a decision was given in favor of admitting this material free of duty. The decision of the Board in connection with this matter states that the evidence is that this lumber, ranging from 10 ft. to 16 ft. in length, 6 in. in width, and 1 in. in thickness is reduced to its present form by being put through a planer, the board being fed through the planer by pressure rolls crowding it against knives. Smoothing of the sides and edges as well as the coving or concaving effect are all produced by planing, the knives being adjusted so as to produce the desired results. These boards are known generally as "novelty siding" and sometimes as "clapboards" or "fancy clapboards." The witnesses, who appeared to be men of extended experience in the manufacturing and selling of lumber, practically united in saying that planed lumber, as known to the trade, embraced all forms of lumber made through the use of a planer or a planer and matcher. Such lumber, very obviously had not lost its identity as lumber, by being manufactured into an article with a distinct and new name. The most that might be said was that these boards were "lumber manufactured" which was altogether different from "manufactures of lumber." In a former case, *Unittd Stated v. Dudley*, it had been held that boards and planks, planed on one side and tongued and grooved and adapted for flooring, ceiling and sheathing were nevertheless, not manufactures of wood. The Treasury Board stated also that they were satisfied that it was the purpose of Congress, in the last revision of the tariff, to place all kinds of lumber, regardless of how it had been treated, so long as it had not lost its identity as lumber, on the free list.



Planers, Grading Table and Distributing Panel



Blow Pipe System Showing Motor

The Uses and Costs of Balsam Fir

Market Greatly Widened by Rapid Expansion in Demand for Spruce—Stumpage Prices and Logging Costs

A bulletin upon balsam fir, prepared by Raphael Zon has been published by the United States Forest Service. The bulletin is the result of study carried on during two summers in the Adirondacks in Maine, and throughout the whole of the tree's commercial range. In the introduction the bulletin says:—

The enormous expansion of the pulp industry in this country during the last two decades, with its present annual demand for not less than three and a quarter million cords of coniferous wood, has stimulated the use of balsam fir, which but a few years ago was considered of little value. With the increase in the price of spruce for pulpwood, balsam fir has begun to take its place for rough lumber, laths, shingles, and box shooks. The cutting of balsam fir to any extent for pulp or lumber began only about twenty years ago, as the more valuable species of the northern forests became scarce and as its suitability for many purposes for which only white pine or spruce were originally used became recognized.

Balsam fir, though in general inferior to white pine and red spruce, is now a tree of considerable economic importance in the northeastern forests. The uses for which balsam fir is suited and the appearance of barked wood, especially after it has remained for any length of time in water, are so much like those of spruce that it is commonly sold in mixture with and under the name of spruce, because of a lingering prejudice against balsam fir among pulp manufacturers and lumbermen. This prejudice, formed at the time of still abundant supplies of spruce and white pine, is based partly on the actual inferiority of balsam fir to those species and partly on insufficient familiarity with the wood.

The heaviest commercial stand of balsam fir are found in Canada, in Quebec and Ontario. On the Cape Breton Islands, balsam fir forms a solid forest, with not over 15 per cent. of spruce and a small admixture of paper birch, covering a plateau of 1,000 square miles. It is estimated to compose more than 50 per cent. of the forest, 150,000 square miles in extent, on the southern slope of the Laurentian shield, south of the height of land. In the United States balsam fir is found in commercial quantities in most of Maine, the northern parts of New Hampshire, Vermont, New York, and to some extent also in the swamps of northern Wisconsin, northern Michigan, and Minnesota, or, in all, over an area of approximately 35,000 square miles.

Dealing with the use of balsam fir as lumber, the bulletin says: The increased demand for spruce by pulp men, who were able to pay higher prices for it than the lumbermen, compelled the latter to turn their attention to hemlock and balsam. Hemlock enters now more and more into building operations, supplanting spruce; while balsam fir, not being as strong as spruce, is relegated to uses for which strength is not a prime requirement. The total cut of balsam fir for lumber in 1909 was reported as 108,702,000 board feet.

Balsam fir is softer and more brittle than spruce; it decays rapidly in the ground, and when green does not hold nails well; but being light and tasteless it makes a very desirable box material, especially for foodstuffs. It is extensively used for cheese-box headings, staves for fish and sugar barrels, sardine cases, butter boxes, and the like. It is easily worked, and is well adapted for molding, novelty, bevel, and drop siding. It is of straighter grain than spruce, and in seasoning is less subject to warping and twisting, which makes it the better of the two woods for fence boards, small joists, planing, scantling, laths, and shingles. Its white color often makes it desirable for house finishing, and some consider it superior to spruce for violins. It saws easier, dries quicker, and is claimed to hold paint better than spruce. It has also been found to be suitable for rough lumber, flooring, ceiling, studding, crating, furniture, sheathing, children's carriages, toys, small frames, matches, square timber, excelsior, etc. In the form of box boards it yields about ten per cent. of material more to the cord than does spruce.

In 59 out of 141 sawmills which answered the circular letter, the use of balsam fir in the past few years has not perceptibly increased. Thirty-four mills now use from 10 to 40 per cent. more than formerly, 30 mills from 40 to 75 per cent. more, 13 mills from 75 to 100 per cent., while two mills use four times as much as they used three or four years ago. Only three mills report that the amount of balsam used by them has decreased.

Balsam Fir Pulpwood

Balsam fir finds its greatest economic importance as a pulpwood. There is a close connection between the extent of the available supplies of spruce in a State and the amount of balsam fir used in the manufacture of pulp and paper. As long as there is a plentiful supply of the former, the use of balsam fir is naturally restricted. But where the demand for pulpwood is greater than the available supply of spruce, balsam is the accepted substitute. Out of about 2,220,000

cords of domestic coniferous wood used in the United States by the pulp industry in 1910, 6 per cent., or 132,362 cords (about 66,000,000 board feet), was balsam fir.

The principal objection to the use of large amounts of balsam fir in the ground-pulp process is said to be on account of the pitch that covers the felts and cylinder faces. It is admitted by nearly all pulp and paper men that from 10 to 25 per cent. of balsam can be used in ground pulp without lowering the grade of the paper produced. A few go even so far as to claim that a larger admixture of balsam fir—from 20 to 25 per cent.—is of advantage, in that it makes the pulp "free"; that is, separates the spruce fibers during the manufacturing process and in this way allows the water to be easily drawn from the sheet. Still others claim that a satisfactory ground wood pulp can be made almost entirely of balsam. In chemical pulp, because of the acids dissolving the pitch any amount of balsam can be used, though some claim that paper made of pulp containing a large admixture of balsam lacks strength, snap, and character. The pitch gives most trouble in freshly cut balsam, while in wood soaked in water over a season the amount is so small that it need not be taken into account. Some of the larger mills claim that after balsam fir has remained in the pond for one year any amount of it can be used.

Difficulties in Logging

Compared with spruce, balsam fir is difficult and expensive to log. It is small, and therefore a gang working in a pure stand of balsam can not cut in a day as much as when working in spruce. When green, it is heavier than spruce and therefore harder to snake out and handle, especially in summer in the swamps. It yields a greater per cent. of cull, and in many cases the presence of rot can not be detected until the tree has been felled and cut into. It floats heavily, and many logs become water-soaked and sink, making the driving very difficult. To offset these disadvantages, and to make the use of balsam more profitable, its stumpage price should always be lower than that of spruce.

Stumpage Prices and Logging Costs

The ruling price in the Adirondacks for cutting and skidding pulpwood (long logs) is about \$1.50 per cord. In this price the cutting of roads is included. The extra cost of resawing the long logs into 4-foot lengths and piling them along the log road is ordinarily 40 cents per cord, and requires, in addition to the regular crew of six men, two sawyers on the skidway. The logs, which in such cases are cut into lengths that are multiples of 4—as 12, 16, and 20—are snaked to the skidway, where they are sawed into 4-foot stick and piled. A gang of eight men will cut, resaw, and pile from 9 to 12 cords per day. In cutting 14-foot lengths a gang of six men will cut and skid from 14 to 16 cords a day. The price of hauling varies with the distance. For two or three trip hauls per day, with 2 to 3 cords per sled, the charge is ordinarily \$1.60 per cord. If the distance is short and several trips are possible the price is less. The stumpage price is a very variable quantity, ranging all the way from \$2 to \$3.50 per cord. Such pulpwood is supposed to contain, besides spruce, 10 per cent. of balsam and 10 per cent. of hemlock. As a rule, however, the percentage of balsam runs much higher. Since balsam pulpwood is hardly ever bought by itself, the price could not be determined, but it is probable that pure balsam pulpwood would command from 50 cents to \$1 per cord less than the ordinary pulpwood now offered on the market.

The stumpage price of balsam when not cut with spruce in Maine, is in the neighborhood of \$3.50 per 1,000 board feet, while spruce stumpage ranges from \$4 to \$7, a conservative average being about \$5. Timber more than one-half mile from a landing is yarded; that is, put in piles of 20,000 to 50,000 board feet, and is hauled in February and March, when the snow is good. Hauling costs 50 cents per 1,000 board feet per mile. In addition, it takes four men at the yard to shovel snow off the piles and help load. Three men are required at the landing to mark and roll the logs. Each logger within one-half mile of a landing hauls as many logs as possible direct to the landing without yarding; this saves the cost of handling the logs twice. Thus, while the cost of hauling direct to the landing may not be over \$4 per 1,000 board feet, yarding and then hauling increases the cost of getting out the logs to the landing to about \$7 per 1,000 board feet. This cost, however, varies with the number and size of the logs, the distance to drag or haul, and the ease with which the timber can be reached. Dense undergrowth, necessitating the addition of one or more swamper to the crew, will, for instance, increase the cost of getting logs to the landing.

From \$6.50 to \$7 ought to cover, on an average, the cost of getting logs to the landing. Long drives, interrupted by large stretches of dead water, make driving an important item in Maine.

Balsam is driven along with spruce and, except for its greater sinkage on long drives, behaves in almost the same way. It seldom causes a jam, for if a balsam log gets crosswise in a bad place it usually breaks. Spruce, on the other hand, would hang and perhaps start a jam.

Protecting Ties Against Wear

At the annual meeting of the American Wood Preservers' Association at New Orleans, January 20-22, the above paper was read by Howard F. Weiss, director of the Forest Products Laboratory, at Madison, Wis. Pictures, diagrams and tables are omitted.

In 1907 the American Railway Engineering Association sent out a number of letters asking various railroad engineers what per cent. of their ties failed from decay and what per cent. from mechanical destruction. The replies in general were that about ninety per cent. of oak ties failed because of decay, as against twenty-five per cent. of cedar. In other words, the mechanical destruction of the ties varied from a minimum of about ten per cent. for oak to a maximum of about seventy-five per cent. for cedar. The many good results which have been and are being secured by timber treating engineers in protecting ties from decay are placing each year a larger per cent. of our ties in the cedar class in so far as their mechanical life is concerned. This means that the problem of mechanical protection is one of increasing importance. It is a waste of preservative, effort and money to inject into ties an amount of preservative which will protect ties beyond their mechanical life because after the tie has once failed mechanically it is removed from the track and destroyed. With costly treatments, particularly such as are given by the full-cell creosote process, this problem is of immense importance to railroads, as it may mean a waste of hundreds of thousands of dollars yearly. If the tonnage of the road is light, as with many traction companies, the arguments here advanced for tie plating and more expensive fastenings are not of such immediate importance. In fact, in such cases it may often prove inadvisable to tie plate, especially if the ties are made of a hard wood. In this paper I wish to discuss briefly the protection of ties from mechanical causes of failure and will not go into the subject further than to indicate certain points of interest to timber treating and railroad engineers. By the mechanical destruction of ties I mean rail wear and spike cutting.

The protection of ties from rail wear is secured by means of tie plates. These serve two primary functions: (1) The protection of the tie from the crushing and pounding action of the rail due to the passage of rolling stock; (2) the protection of the tie from the grinding action of the rail caused by its tendency to creep and vibrate.

A great variety of plates has been advocated to protect ties from destruction. They may be classed, however, as wood and metal plates. The former are rather extensively used abroad, and are also under test in this country. From the experience which we have had with them in different test tracks laid in co-operation with American roads, the results have not thus far been satisfactory. Wood plates offer little or no reinforcement to spikes when these are subjected to a lateral thrust; consequently, spikes are more likely to bend and rail spreading is likely to occur. Furthermore, the plates often tend to work loose from under the rail and if spikes are driven through them they split badly. In some of our tests, where wood plates were attached to the ties, they actually became imbedded in the ties. If the tie is slotted so that the plate can be inserted in such a manner that its upper surface will be level with the top of the tie many of these objections are overcome, but this method of treatment increases the cost of preparing ties for service and also weakens them.

More satisfactory results have thus far been secured, in our experiments at least, with metal plates. These vary considerably in form, but may be classed into two types, viz., pronged or ridged plates and flat plates. The object of the former class is to imbed the plate in the tie, thus making it a part of the tie and assisting the spikes in resisting rail spread. The chief disadvantage we have noted to this type of plate is its tendency to gouge into the wood and at times completely destroy it. The untreated interior of the ties is thus exposed to the weather and decay is readily admitted. Flat plates do not have this objection, but are troublesome at times in that they become loose and rattle under the rail. Furthermore, they simply rest upon the tie and offer no reinforcement to the spike against lateral thrust.

A feature in tie-plate construction which has perhaps not been given the serious attention to which it is entitled is the size of plate for the kind of tie on which it is to be placed. A light, small tie-plate is of little or no value in protecting the tie from destruction. It is necessary to have the plate of sufficient surface area so that the crushing action of the rail will be distributed as widely as possible, and to have sufficient thickness, so that no buckling will occur. As is generally known, the various woods which are now manufactured into crossties differ very appreciably in hardness and in crushing strength. Cedar, loblolly pine, etc., are considerably weaker than black locust and white oak, for example. If cedar ties are interspersed in a track with white oak ties and the same sized tie-plates are placed upon both, the cedar ties are going to fail from mechanical destruction far more quickly than the white oak ties. That track is best laid which makes each tie carry its proportionate share of a passing load; therefore, to secure best result, tie-plates should be so designed that the

unit loads placed on various kinds of ties will be approximately the same. Perhaps best results are secured by placing in the track ties of uniform hardness, at least in given stretches.

The Forest Products Laboratory has made over 2,000 tests on about seventy species of timber to determine their resistance to crushing when the force is applied at right angles to the grain as in the case of crossties.

I have taken as my standard for comparison with other woods a white oak tie. A number of woods are stronger than white oak, and hence the size of tie-plate which they would require would be smaller than that required by white oak. On the other hand, most of the ties have a less crushing resistance than the standard white oak tie, and for this reason require larger plates. There is a fixed relation between the specific gravity or dry weight of the wood and its strength; in other words, woods which are light in weight are low in crushing resistance, while woods heavy in weight offer considerable resistance to crushing. It might be claimed that this property of hardness or strength should be considered in fixing the price of crossties; that is, ties which have a low crushing strength, and which consequently require a large-sized tie-plate in order to be protected from mechanical destruction, should, other things being equal, sell at a lower price in an untreated condition than similar ties which are heavier and which offer greater resistance to mechanical destruction. If this principle were carried out in practice it would result in some cases in a readjustment of tie-plates. It is felt that such a readjustment is warranted from the standpoint of efficient track maintenance.

The question has frequently arisen, "What effect have the different preservative processes upon the strength of ties?" This matter has been investigated by Dr. W. K. Hatt at Purdue University. The difference in strength between treated and untreated ties, except in the cases of those treated with crude oil, is so slight as to make this a matter of little practical importance. Of course, this statement assumes that the ties are properly treated and not injured by excessive heating or other causes.

The function of spikes is to hold the rail to the tie, which, analyzed, means that they must exert a resistance to pull and resistance to lateral thrust, the former resulting from the so-called "bumping" of the rail, the latter accentuated by the centrifugal force exerted by the train in rounding curves. As in the case of plates, a great many methods have been advocated for fastening rails to ties. The Patent Office is filled with devices aiming to secure this apparently simple end. I cannot even attempt to consider all of the various schemes advocated but will call your attention to three types of construction in more or less extended use. These involve the use of the cut spike, and the dowel.

The cut spike is by far the most generally employed in this country. It is cheap, enables a quick laying of the rail, and is easily applied. When freshly driven in sound, heavy timber it also gives very satisfactory results. It has, however, been subject to severe criticism because it frequently becomes loose in ties and under such condition may cause an unsafe track. This feature has led to considerable experimenting in an effort to overcome these disadvantages.

The screw spike has been most successful thus far in removing the chief criticism levied against the cut spikes, viz., its low holding power. Screw spikes, however, are more costly than cut spikes and more difficult to insert in the track. Their use, however, is growing and will doubtless continue to do so, as this form of spike possesses considerable merit. In a large number of tests made at Purdue University, a part of which were conducted by the Forest Service, it was found that screw spikes had from 1.7 to 3.8 times the strength of common cut spikes against pull, and from 1.2 to 2.4 times the lateral resistance of the common spike. In round numbers one screw spike is about as efficient as two cut spikes so far as holding the rail to the tie is concerned.

The large number of ties cut from comparatively soft woods, such as loblolly pine, have encouraged certain roads to experiment with hardwood dowels. These are simply plugs of hardwood, such as red oak, usually creosoted, screwed into the tie. The spike is then driven or screwed into this hardwood dowel. By this method a very firm grasp of the rail to the tie is secured, and should the spike become loose and worn, the hardwood dowel can be unscrewed from the tie and a new one inserted. Of course, such a method of treatment is expensive; and, furthermore, it has a disadvantage in that it weakens the tie unless the ballast is kept in very good condition. Where it has been put to practical test this method has, however, yielded very satisfactory results.

This is a feature of preparing ties for service which is also of comparatively recent origin in this country. As by far the larger majority of crossties now in use are hewn, the problem of securing a uniform bearing of the rail or tie-plate on the tie is of great importance. Unfortunately, common practice in this country consists in adzing such ties after they have been treated. This removes the preserved layer of wood at the very point where its protection is most needed. In order to secure best practice it is absolutely essential to

have the rail or tie-plate bear uniformly on hewn ties, and the proper time to adze is before the ties are treated, and not after. While the mechanical adzing of ties is still in its infancy, it is quite likely machinery to do this work will become a part of the well-equipped tie-treating plant.

Another feature in too limited use at present is the boring of the ties for the insertion of spikes. When screw spikes are used it is absolutely essential to bore a hole into the tie in order to insert them, and if this hole is bored after the tie is treated the unprotected interior is more or less exposed to decay. Boring should, therefore, be preferably done before the ties are treated. Even with the ordinary cut spike, boring is of direct value. The spikes driven into a hole three-eighths inch in diameter has a greater holding power than spikes driven into the tie not bored. This is due to the fact that when a spike is driven into a bored tie the fibres are not crushed to the same extent as when no boring has been made.

The following general conclusions can be drawn from this paper:

(1) The increasing number of treated ties being used in this country is increasing the importance of protecting them from mechanical destruction because the problem of protection from decay is being rapidly solved. To secure best results, therefore, a protection of treated ties from rail and spike cutting is strongly recommended.

(2) It is believed that, other things being equal, the size of the tie-plate should depend upon the kind of tie with which it is to be used. Soft ties demand a larger plate than hard ties. It is felt that this fact should be recognized in fixing upon the price of various timbers for crossties.

(3) Preservative treatments with creosote and zinc chloride when properly made affect the strength of ties so slightly that any difference in crushing value is of little or no practical importance.

(4) On account of their holding power screw spikes are preferred to cut spikes and can be recommended where high-class construction is desired.

(5) Adzing and boring ties, particularly the adzing of hewn ties, prior to treatment, is considered of prime importance in preparing them for service. Adzing after treatment should be classed bad practice, as it exposes or tends to expose the interior of ties to decay at a point where protection is most needed.

Quarterly Report on Glasgow Trade

Edmiston & Mitchells, Glasgow, in their quarterly timber circular under date of March 31st, report as follows:—Business in this market opened somewhat promisingly at the beginning of the year, and a short spell of reasonably good trade was experienced, but unfortunately these conditions were not maintained for any length of time, a growing tone of dullness having latterly overspread the market. It is somewhat difficult to account satisfactorily for the diminishing demand, although the acute tension in home politics recently has undoubtedly had an adverse influence on business, and the clearing of the air in this direction would certainly do much to restore confidence, which has been sadly wanting of late. There is further, rightly or wrongly, a growing conviction amongst buyers that values will attain to lower levels in the near future, and such being the case, it is natural to find a tendency to restrict purchases as much as possible to the covering of immediate requirements only. It cannot be denied that values generally have been shaping easier, which is partly due, however, to the fall which has occurred in freights.

Imports from British North America

Yellow pine logs.—The only sales reported since the opening of the year were 25 logs 1st class wood and some 80 logs 2nd class wood, low prices being obtained in both instances, but more particularly as regards the latter. Little or no enquiry exists to give hope of any early appreciable reduction being affected in the heavy stocks.

Oak logs.—A moderate demand has been in evidence, chiefly for first class timber of good average size, in which some selling has transpired at firm values. Small and 2nd quality woods have been little asked for, and there are still considerable stocks of such on hand. Southern States timber has met with rather better request, engendered, no doubt, by the scarcity of sizeable Quebec logs.

Elm logs.—A few sales were reported of 1st class rock elm, consisting chiefly of wood suitable for shipbuilding requirements, at firm prices. Some contracting business, also transpired, although to a lesser extent than usual. The stock on hand amounts to 1,121 loads, and averages 40 cubic feet per log.

Birch.—Logs.—Arrivals were few and light in extent. A fairly steady business has passed at quite firm prices, and the heavy stocks carried over from last year are being gradually reduced. Contract business this year was of a rather restricted nature. Planks.—The import was of trifling extent. A moderate business has transpired from stored stocks, while a limited amount of contracting was arranged.

Yellow pine deals and sidings.—The demand has shown some improvement, a fair amount of selling having been witnessed since

the opening of the year, and stocks have been appreciably reduced. Sidings have met with better request, although at unsatisfactory prices generally. Third pine deals, 11-inch by 3-inch, have commanded reasonably steady sale, and the stock of these is now well reduced. Shippers have this season only fixed contracts to a moderate extent, buyers in instances showing an inclination to take the chance of being able to fill their requirements on the open market rather than commit themselves at shippers' quotations.

Liverpool Market Report

Smith & Tyrer, Limited, Liverpool, England, in their monthly trade bulletin, report upon trade conditions during the month of March as follows:—There is a lack of confidence shown by the importers, who in most cases are inclined to adopt a "wait and see" policy. A normal business has been done, but there is no elasticity about the demand. Pitch pine has not been much enquired for, and sales have mostly consisted of parcels forced off under pressure. The situation is unsatisfactory and prospects are not promising. Hewn timber is in little demand. Sawn timber, after going stronger in sympathy with freights, has fallen again to its previous low level. Prime lumber is in better demand but lower qualities are difficult to sell. Hardwoods generally are moving off slowly. Spruce deals, locally, have been over imported by the liners and prices have fallen, and will fall further unless a wiser policy is adopted. It seems folly to flood an overstocked market. Good stocks for season shipment hold their own in value chiefly owing to the firmness of sellers. Pine deals.—Lower Port deals are wanted, but there is not much available. Ottawas keep their small but steady demand. Hemlock.—Shippers are not inclined to accept prices offered. Pacific Coast woods are moving slowly. There is an ample stock of Douglas fir logs. Clear spruce.—The reduction in prices has tended to stimulate the demand, and the market for this material is expanding.

Lumbermen's Building at the Panama Exposition

The Lumbermen's Building and House of Hoo-Hoo which is to be erected at the Panama-Pacific International Exposition is in charge of a committee of lumbermen, representative of all interests, which was recently appointed. The executive secretary is Mr. Frederick Boegle, Jr., who has opened offices in the Fife Building, San Francisco, where visiting lumbermen and others identified with the lumber industry will be welcome at all times. The building will be a unique one-storey structure, covering a large area and surrounded by magnificent gardens. Its artistic treatment and landscape gardening are to be of so high a character that the exposition authorities have given it a choice site in the South Gardens facing the Horticultural Buildings. The building will combine the requirements of an adequate exhibition hall and the comforts of a luxurious club house. Provision has also been made for the great national congresses and conventions of organizations allied with the lumber industry. Energetic steps are now being taken to secure the necessary funds for the erection of the building.

Personal Paragraphs

Mr. Simpson, of Brown & Simpson, lumber merchants, Glasgow, is on a business visit to Canada.

The many friends of Mr. Aubrey Cockburn, the well-known boat builder, of Pembroke, Ont., will be glad to learn that he is slowly recovering from a serious attack of blood poisoning, from which he has been suffering during the past two months.

At the annual meeting of the Riordon Pulp and Paper Company, held in Montreal, retiring officers and directors were re-elected as follows:—Charles Riordon, President; Carl Riordon, vice-president; Charles E. Read, secretary-treasurer; J. G. Riordon, F. W. Avery, Walter G. White, E. J. Douglas, directors.

Mr. Harvey A. Warner, formerly with the Imperial Elevator & Lumber Company of Winnipeg, Man., who went in to business for himself in Toronto recently, has accepted a position with the Rogers Lumber Company of Minneapolis, Minn., with whom he was formerly employed for a period of six years. Mr. Warner has already taken up his duties at Minneapolis.

Mr. Kenneth M. Clark, who is associated in business with Mr. James W. Sewall, of Old Town, Maine, will take charge, for two months, of the field work in timber estimating and surveying for the Harvard Forest School senior class. The employment of a practical timber estimator and woodsman by the Forest School is a step in the right direction. Mr. Clark has been associated with Mr. Sewall since 1907 in active field work, and has also found time to complete a course in the Harvard Forest School. He therefore combines the practical with the technical to an unusual degree. He has had charge of several large contracts in forest surveying for Mr. Sewall, and has shown marked ability in his chosen line of work.

A Pointer on Selling by Width

The increasing popularity of the system of selling hardwood lumber according to width, in order that the customer may be able to buy stock that will require the minimum amount of working in his factory, has developed a number of wrinkles that the lumberman has need to look out for in handling the business.

The necessity of pricing this stock in such a way that the increased expense of handling will be taken care of, along with a proper charge for the extra service performed in separating the various widths, is well understood. The customer is perfectly willing, as a rule, to pay the added price, knowing that he is getting it at a figure which is a good deal less than the expense of working random widths would involve. So this feature of the situation is all right, from all standpoints.

In the actual measurement of lumber sold on this basis, however, there are occasional troubles which are likely to be overlooked by the dealer who has not given special study to the details of handling this trade. In measuring according to widths the 12-foot scale is of course used. The inspector who tallies the lumber, unless he has received special instructions in this connection, is likely to follow the usual system, and "call up" widths which are over the half-inch mark, as well as "call back" those which are under it. In the usual system of measurement this is a satisfactory method of equalizing irregularities of width, and the force of habit is sufficiently strong to result in the same plan being used when lumber is being loaded according to width, unless the inspector is apprised of the impracticability of using this plan.

In order to dispose of the question satisfactorily, the only safe plan is to use the minimum width all the way through. If 7-inch widths are being picked out, only boards which are a full 7 inches in width, or over, can be used. Those which are $6\frac{5}{8}$ or $6\frac{3}{4}$ inches, and would ordinarily be tallied as 7-inch boards, must be thrown out, as far as that particular item is concerned, while if the same customer is buying lumber 6 inches wide, they can, of course, be used in that connection.

The obvious objection to this plan is that the buyer gets all the better of it. He gets the benefit of all the "breaks," since the seller cannot equalize them by giving himself the increased measurement on the "overs," as he does in the case of most shipments. The customer gets as 6-inch lumber all the boards that are 6 inches and over in width, and pays for 7-inch stock on the basis of all the boards that are between 7 and 8 inches in width.

Those who have not given this question attention may be inclined to discount its importance and to estimate the footage involved in a car as too small to worry about. That this impression is not correct was borne out by a recent experience of a hardwood concern. A carload of thin quartered oak of a given width was shipped to a chair manufacturing concern. The inspector who loaded the lumber was a well qualified and thoroughly experienced man, but he had not gone into the matter of tallying according to widths in a case of this kind, and for that reason he gave his concern the benefit of all the boards that were over the half-inch marks.

The lumber was shipped and in due time the customer was heard from. Though the distance was over a thousand miles his kick was felt distinctly at the point of origin of the shipment, and that without the aid of a seismograph. He kicked on the measurement of the lumber entirely, and not on the grade, which was all right. But the measurement differed from that of the shipper by over 1,000 feet! As this was on a shipment of good quartered oak stock the amount involved, as the reader will have anticipated, was enough to make the members of the firm which made the sale do some tall figuring trying to understand how it happened. A little correspondence developed the fact that the buyer had measured the lumber in the form indicated, while the shipper had used the ordinary board measurement system, to his ultimate detriment.

The worst feature of the whole situation was the fact that the purchaser of the lumber could not use boards that were of less than the specified widths, because they had to be finished for use with that dimension. The buyer, as a matter of fact, was purchasing dimension stock, although the result was obtained not by remanufacturing but by sorting, and obviously he specified widths that came as close as possible to the dimensions of the finished material. When he got narrower stock than this, he was unable to use it, no matter how strongly the argument might be made that it was unfair to the lumberman to deprive him of the measurement on all boards wider than the dimension specified.

In the case referred to the settlement was made on a basis that eliminated most of the profit, but members of the firm are now experienced enough to avoid making the same mistake over again. Hereafter, when they sell a car according to width they are going to allow for the loss in measurement which will result from the use of the 12-foot scale in this way and are going to make a price accordingly.

This, incidentally, is the only solution of the problem. It might be argued that the proper way to handle it would be to sell according to half-inch divisions, and that when sorting for widths in the lumber yard to pile 6-inch, $6\frac{1}{2}$ -inch, 7-inch, $7\frac{1}{2}$ -inch, etc., separately, so that when the time came to load out a car of any given dimension there would be no necessity of giving the buyer something for which he would not be called on to pay. But there are a number of practical difficulties in the way of the adoption of this plan. One is the greater amount of stock that would be needed to carry on the business, and to get a carload of any given dimension, and the other is that buyers seldom ask for widths of odd dimensions, usually ordering according to whole numbers.

The plan which seems to fit in with the needs of the situation most exactly is to keep in mind the probable loss that will be suffered and then charge for it. The lumberman realizes thoroughly when he sells a car of selected stock that he has had to put in additional labor to sort out the special widths wanted; he probably has had to do a good deal of careful sales work in order to find buyers for the various widths, and consequently he knows that he must ask a price for the lumber which will take care of the extra expense.

In the same way he can figure approximately, by reason of experience (and he can make actual tests which will determine the facts), what the loss in measurement is when the 12-foot scale is used as described, compared with ordinary board measurement of random widths, and consequently the proper system is to make an allowance in the price for this factor. Otherwise the result is likely to be a smaller profit per thousand than appeared from a superficial examination of the price at which the lumber was sold, compared with the figures quoted on unsorted material.

Another point that should be remembered in sorting lumber according to width, with the idea of being able to offer special service to the consumer, is that the especially wide stock necessarily must carry a higher margin of profit than the narrower boards. This is for the reason that the wide stuff usually has a considerable premium anyway, and the lumberman could get this without sorting if he were to sell on a basis of a shipment containing a given percentage of wide stock. As far as these items are concerned the labor of sorting them is more or less unnecessary, from a sales standpoint, and is not required in order to get the maximum price for them. It is, however, a big convenience for the buyer who has been contenting himself with buying random widths, with a guaranteed percentage of wide stock, to be able to buy that class of lumber exclusively if he needs it, and he consequently should pay more in proportion for it than would be indicated by the premium offered for the percentage of extra wide stock included in an ordinary shipment.

As a matter of fact, many lumbermen who have gone into the question of sorting for widths have found that it is much easier to get the advanced price which they ask for narrow stock than for wide. Consumers who have been using the narrow stuff, but buying random widths and having to do a lot of ripping in order to get the right dimensions, have realized at once what a big saving they are making in securing the dimensions they need, while those who want wide stock have been getting a good deal of it by the payment of a comparatively small premium for its inclusion in a shipment of random widths. They fail to realize the extent of the service offered them by the lumberman who is prepared to give them exactly the widths they need.

The lumber dealer who is featuring the sale of special widths is a good deal like the millman who is cutting up his lumber into dimension stock: he must get a price commensurate with the added value he has given his lumber if he is going to be able to continue handling it in that way. The surest method of coming to grief in this business, just as in dimension manufacture, is neglecting the cost of performing the various features of the operation and failing to make a proper charge for them. Only by studying all of the elements involved and determining the proper price with reference to them can a fair profit on every sale be insured.—Hardwood Record.

Quebec Wharfage and Storage Charges on Wood and Pulp

New wharfage and storage charges have been fixed by the Quebec Harbor Commissioners in a new set of by-laws which they passed, and which were approved by the government at Ottawa recently. It is provided that lumber, timber and wood pulp for export will be free of wharfage charges, while pulpwood will be charged at the rate of $12\frac{1}{2}$ cents per cord. The storage charges will be as follows: On timber, lumber, pulpwood, ties, etc., per square of twelve feet, \$1 per square per month or part of a month.

Buffalo jobbers are figuring on placing an order for 3,000,000 feet of yellow pine, a great part of it being bill stuff, says the American Lumberman. They look upon this trade as bound to improve steadily, especially as they find that the lumber can be sold in Canada. The prospect is that Canada will soon be receiving much more lumber than it is selling to the United States unless it be the spruce and cedar that goes down the coast toward New York.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Box Co., Ltd., Toronto, Ont. 7-tf

Shavings and Sawdust

Wanted to buy. Would prefer shavings baled and separate from the sawdust. Quote prices at your station.

M. BRENNEN & SONS, Hamilton, Ont. 7-12

Wanted

500,000 feet 1-in., 1½-in. Soft Elm.
700,000 feet 1-in. Basswood, Ash and Birch.
For delivery as soon as dry this year. State what you can supply and lowest prices on cars.
Box 945, Canada Lumberman, Toronto. 3-8

Hardwood Piles

Wanted immediately, Birch, Beech or Maple Piles, cut from straight and found live timber, not less than 8-in. tops and 14-in. butts—length 35 to 40 ft. State best price and point of shipment. Box 9, Canada Lumberman, Toronto. 8

Wanted to Buy

One million feet 1-in. Dead Cull Pine, also fifty thousand feet 1-in. Cull Spruce or Hemlock. Apply

M. BRENNEN & SONS, Hamilton, Ont. 6-9

Wanted To Buy—1000 Birch Logs

fresh, clean, straight and sound, 14-in. and up diameter at small end, 8 ft. to 16 ft. long. Delivery to commence as soon as possible. Terms: 75 per cent. cash when alongside track at railway station, balance when loaded on cars. Write P. O. Box No. 1595, Montreal, stating best price. t.f.

Wanted to Buy

250,000 ft. 4/4 No. 1 C. & B. Basswood, winter sawed.

Ten cars 4/4 x 12-in. and up Soft Elm.

One car 4/4, 6/4 and 8/4 1s and 2s Soft Elm.

Box 998, Canada Lumberman, Toronto 7-10

Lath and Lumber Wanted

1000 M. Pieces No. 1 White Pine Lath.

1500 M. Pieces No. 2 White Pine Lath.

2500 M. Pieces No. 3 White Pine Lath.

500 M. 1-in. Log Run Brown Ash. Mill Culls out.

500 M. 1-in. Log Run Basswood. Mill Culls out.

300 M. 1-in. Log Run Soft Elm. Mill Culls out.

Now sawn or to be sawn.

Quote lowest prices car mill.

C. A. SPENCER,
Eastern Townships Bank Building,
Montreal, Que. 7-8

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft. P. O. Box 392, Ottawa, Ont. 3-t.f.

For Sale

200,000 feet of Cedar. Can be sawn to order of purchaser. Address Box 8, Canada Lumberman, Toronto. 8

For Sale

Quantity of White Oak Lumber, assorted thicknesses.

A. P. EBERT,
Box 287, Huntsville, Ont. 8

Hard Maple and Hemlock

We have half a million feet hard maple and half a million hemlock. Can cut dimension stock. Write best offer.

Trenton Cooperage Mills Limited,
Trenton, Ont. 7-10

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.

375 Pieces 1 x 15 and up 24 ft. Cypress.

Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que. c

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,

Timber Department,
Janesville, Wisconsin. 1-t.f.

For Sale-Machinery

For Sale

or exchange for heavy type surfacer, lath machine, lath boiler, lath cut-off, new; manufactured by Wm. Hamilton Mfg. Company, Peterborough.

STONE LUMBER CO.,
Marksville, Ont. 8

Mill Machinery For Sale

Complete saw mill plant for sale including two single cutting band mills, gang, and all equipment in first class working order. For particulars apply to the Dickson Company, Peterboro, Ont. 5-8

Second Hand Machinery

150 to 175 h.p. Corliss Engine, 16-in. x 36-in., new two years ago.

75 to 100 h.p. Brown Automatic, 13-in. x 30-in., in excellent condition.

500 to 750 h.p. Buckeye; a good sawmill engine.

Boilers, 72-in. x 18-ft. and 54-in. x 14-ft.

THOMAS HOBBS,

Mail Building,
Toronto, Ont. 7-t.f.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted as circular saw filer. Nine years' experience. W. C. Morton, Richmond, Ont. 8

Position wanted as sawyer. Circular. single or double cut band saw. Box 306, Parry Sound, Ont. 8-11

EXPERIENCED LUMBER INSPECTOR wants position. Address Box 986, Canada Lumberman, Toronto. 6-9

Position wanted as band saw filer, double or single cut. First-class references. Address Box 972, Canada Lumberman, Toronto. 8

COST CLERK desires position with a woodworking concern. Ability to organize. Practical and experienced. Best of references. Box 990, Canada Lumberman, Toronto. 7-8

Position wanted as band saw filer, or can take full charge of resaw band. Four years' experience. Strictly temperate. State wages offered. Box 985, Canada Lumberman, Toronto. 6-8

Saw filer, band or circular, wants position. 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 5-8

First class sawyer wants position for the coming season on right hand single cutting band mill. 32 years of age. Strictly sober and steady. Six years' experience sawing on fast mills. First class recommends. Ray Cole, Norwich, Pa. 8

Experienced White Pine Shipper and Salesman wants position, either in the manufacturing or wholesale end. Practical knowledge of the lumber business from stump to market. Best of references. Address Box 7, Canada Lumberman, Toronto. 8

Position wanted as Lumber Inspector of soft and hard wood. Could act as Salesman. Twenty-six years' experience. Capable of superintending manufacture of lumber in big saw mill. Speaks French and English. P. Provost, Box 157, Hull, Que. 8

Wanted-Position By Experienced Manager

To take charge of lumbering operations. Can get results and furnish the highest credentials. Canadian. Box 973, Canada Lumberman, Toronto, Ont. 8

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

WANTED—Experienced book-keeper for retail lumber business. State fully previous experience. Box 6, Canada Lumberman, Toronto. 8

WANTED—Lumber Traveller for Ontario. Would prefer young man with experience. Reply confidential. Box 5, Canada Lumberman, Toronto. 8-11

WANTED—One band sawyer and one setter for mill with steam feed and nigger and steam set works. Apply to Donald Fraser & Sons, Limited, Cabano, P.Q. 9

WANTED—The Fraser Brook Lumber Company, authorized capital \$100,000, paid up \$53,000, want agent to sell their balance of stock (shares). Apply to J. E. Pineau, Secretary, Fraserville, Que. 7-8

WANTED—Two band saw setters, and two edgemen. Mill starts April.

Prince Albert Lumber Company, Ltd.,
Prince Albert, Sask. 7-8

Business Chances

For Sale-Retail Lumber Yard and

Planing mill, \$5,000. Stock at invoice prices. Last year's business \$25,800. Natural gas power. Railway siding. 400 ft. metal sheds, etc. Caledonia Milling Co., Ltd., Caledonia, Ontario. 6-9

Active Partner

Wanted to join practical man now operating sawmill at Barriere, B.C., on the C. N. R. Within easy reach of Prairie markets and a plentiful supply of good lumber. Write Box 997, Canada Lumberman, Toronto. 7-9

Money To Invest

Thoroughly practical lumber and mill man has \$2,000 to invest in a good going lumber concern, in which he could have a responsible position. Can handle any part, logging or milling operation. Address Box 248, Woodstock, N.B. 8

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. t.f

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

Big Money in Silos

Big money can be made in properly constructed wooden silos and tanks. We are large U. S. manufacturers and have unquestionably the best methods for silo and tank construction. We want to sell our Canadian Patents outright to some live manufacturing firm in Canada. For particulars address Box 1, Canada Lumberman, Toronto. 7-8

British Columbia Saw Mill and Timber Limit For Sale

A 25-thousand feet capacity Saw Mill, and 90 million feet first class Spruce, Red Cedar, Hemlock and Yellow Cedar, etc., under B. C. Special License. At good shipping point near Prince Rupert, B.C. Inspection invited. A. Cuthbert, P. O. Box 456, Prince Rupert, B.C. 6-11

For Sale

Complete sawmill outfit, practically new; capacity 12 M. ft. hardwood. Marine boiler, 50 h.p., and Dutch oven. 40 h.p. engine. No. 4 carriage with overset lever. Cable feed. Friction canter. Double edger; cut-off saw and a full complement of large and small saws and belting, including a 14-inch 2-ply leather driving belt. Frame building, iron roof.

Also Long Mfg. Co. Clipper Shingle Machine in best of condition, and outfit complete; will be sold with sawmill or separate. Mill at Angus, Ontario. Apply Frank McMulkin, Barrie, Ont., who will show mill, or Chas. T. DePuy, Rochester, N.Y. 8-10

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

Liquidator's Sale of Valuable Sawmill Property and Plant

Re: Winding Up Act, R. S. C. Chapter 144, and

Re: Charlton Sawmill Company Limited

With the approbation of the Master-in-Ordinary of the Supreme Court of Ontario, The Title and Trust Company, the liquidator herein, will up to 12 o'clock noon of the 2nd day of May, 1914, receive at its office, Traders Bank Building, Number 61 Yonge Street, Toronto, sealed tenders marked "Charlton Sawmill Company, Limited Tenders," for the purchase of the real and personal property of the Company hereunder mentioned. The advertisement and tenders pursuant thereof are subject (as to chattels) to private sale by the liquidator in the meantime.

Parties desirous of submitting tenders may inspect the said property or any of the articles hereby offered and the inventory thereof upon application to the liquidator, The Title and Trust Company, at its said office or to Thomas Hoy, Collingwood, Ontario, for both the freehold and chattels en bloc or separately for each or any part of machinery or chattels.

Description of Property

PARCEL 1. Consisting of about 20 acres within the Town limits of Collingwood, County of Simcoe, Ontario, the particular description of which may be obtained from the liquidator, and upon which are erected the mill building, the office building, dwelling and boarding house.

PARCEL 2. ALL AND SINGULAR the machinery of said sawmill consisting partly of one Waterous single cutting band, one Garland single cutting band, steam niggers, steam kickers, 10 inch steam feed, one double Garland edger, live rollers, trimmers, 200 feet of transfer, etc., etc.

The mill is in good condition and running order with a capacity of about 80,000 feet per 10 hour day.

The Real Estate is subject to a first mortgage upon which the balance of principal money unpaid and interest up to and including the date of this notice is the sum of \$2,162.16; and to a second mortgage upon which such balance is the sum of \$5,836.30. These mortgages to be assumed by purchaser.

Conditions of Sale

Tenders will be a sum including said mortgages.

An accepted cheque payable to the liquidator for 10 per cent. of the amount tendered shall accompany each tender which will be returned if tender is not accepted. The purchaser will be required to pay an additional 40 per cent. on notice that tender has been accepted, the remainder to be secured to the satisfaction of the liquidator and payable with interest at 5 per cent. per annum in equal portions in 30 and 60 days after acceptance of tender, possession of chattels on payment of 50 per cent. and completion of said security. Possession and conveyance of the real estate on payment in full with proper adjustments. The highest or any tender not necessarily accepted.

No warranty is given by the liquidator and none expressed or implied shall arise in acceptance of any tender.

The purchaser will be required to search the title at his own expense and the liquidator shall not be required to produce any title deeds or muniments of title or abstract of title other than those in its possession.

Dated at Toronto this 1st day of April, A.D. 1914.

THE TITLE AND TRUST COMPANY,
Liquidator.

JOHNSTON, McKAY, DODS & GRANT,
Solicitors for the Liquidator.

Miscellaneous

Wanted—Rails

1½ tons No. 12 relaying rails, new or second hand. Also 1 Frog and Switch, one turn out and two Lumber Trucks for 3-ft. track. Lawrence Bros., Ltd., Canoto, Ont. 8

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

Uses for "Wood Waste"

Sawdust is now becoming of sufficient value to ship it to points where it can be used for ice packing, stable bedding, stuffing for upholstery, packing glassware, for shipment of metals, crockery, etc. Sawdust is even used for the manufacture of gunpowder and in Europe it is compressed into briquettes and sold for fuel. A few plants have already been organized for utilizing sawdust for briquettes. Slabs, edgings and tops are now being profitably converted into cooperage stock, broom and other handles, wood turnery, wooden dishes and novelties, dowels, furniture rounds, etc.

These small things seem unimportant at first, yet there were used last year in New York State alone over 800,000 board feet of wood for dowels which are small wooden pins used principally to hold parts of chairs and other kinds of furniture together. Over 962,000 board feet of hardwoods were used for such small articles as shuttles, spools and bobbins. Brushes and brooms consumed over a million and a half board feet, while such apparently unimportant materials as toys used nearly 3,000,000 board feet of wood in one year. All of these articles and a great variety of

others can be made from mill waste, short lengths, defective butts and tops that have formerly been considered of no value and left in the woods. Last year over 470,000,000 board feet were used in New York for boxes and crating. This is equivalent in itself to about 3/5 of the total lumber of the State.

Many Uses for Oak and Ash

The London Timber News says that to the uninitiated in these matters, the vast quantities of oak timber that are annually cut up to keep pace with the trade for boards and all other converted wood sizes seems out of all proportion to the number of trees

that are annually felled. But then it must be remembered that an oak tree of, say, fifty cubic feet content will cut into a very large amount of boarding, posts, poles, or any of the hundred-and-one uses to which the timber is applied. For furniture manufacture and wagons for mineral traffic, building materials, dome and roofs of public buildings, cart and wagon bottoms, wheel spokes, railway sprags and many other important purposes where great strength and lasting properties of the wood are points of consideration, oak timber is largely in use. Ash timber is no less useful, especially where strength and suppleness of the wood are qualities in request.



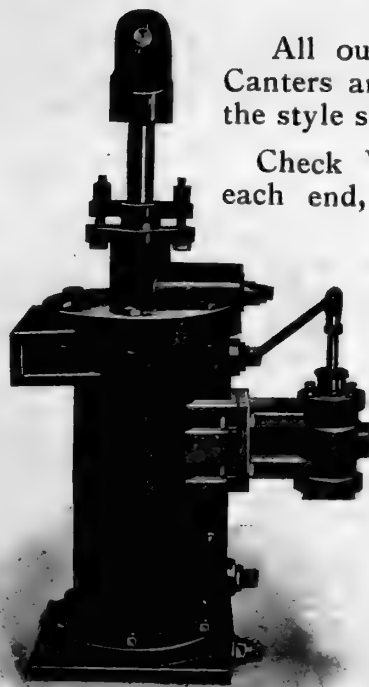
RED PINE DRY.

3 x 11	2½ x 9	2 x 4	5/4 x 6
3 x 10	2½ x 8	6/4 x 11	5/4 x 5
3 x 9	2 x 12	6/4 x 6	5/4 x 4
3 x 5	2 x 10	6/4 x 5	1 x 6
3 x 4	2 x 8	6/4 x 4	1 x 5
3' Shorts	2 x 6	5/4 x 9	1 x 4

4/4 to 8/4 Clear and Clear Face.

Watson & Todd, Ltd., Ottawa, Ont.

Log-Handling Machinery



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Review of Current Trade Conditions

Ontario

Very contradictory reports have been received from Northern Ontario regarding the outlook for the drive this spring. The situation apparently is one which leads to much uncertainty. So far as could be gathered from a number of reports, however, there was a large amount of ice in the lakes up to the middle of April, and, as a great many of the rivers in the north have been improved for driving purposes, the probability is that, what with the water conserved by dams and the water which will come when the ice melts, there will be a good supply for the drives. In spite of this, however, a number of northern operators have been expressing pessimistic views regarding the outlook. Some operators are of the opinion that the drive will result in a large quantity of logs being held up, while others express a firm conviction that the drive will be one of the best that has been experienced in many years. There is apparently no means of determining in advance just what conditions will be. There is no doubt that the output in the woods during last winter was secured under exceptionally favorable weather conditions and was large enough to furnish plenty of stocks for the coming season's trade, if the drives are successful.

From retailers in many parts of the province we gather that trade, although quiet, has been of a fairly satisfactory nature during the past month and that the outlook for the summer is fairly promising. Farmers are reported to be in a very sound condition financially. Collections, although dragging to some extent, have been fairly good, most parties coming forward with payments when pressed. Prices are about the same as they were a year ago, with the exception of a few lines which may be scarce in particular localities. Retailers report that most of the yards are fairly well stocked for the spring trade, and apparently the large majority of them are confidently expecting that, once the building season has definitely opened, the demand for lumber will be quite satisfactory.

A noticeable improvement is reported in trade conditions at Ottawa, practically every lumberman being now a great deal busier than he was a fortnight ago. American buyers have made a number of important purchases. Building operations are much larger than they were a year ago, as indicated by permits during the past month for buildings valued at \$307,800 as compared with \$194,489 during the corresponding month of last year. The indications are that the cut in the Ottawa Valley this year will be considerably larger than last year. Sash and door factories are very busy.

Eastern Canada

The backward spring season has retarded building operations at Montreal, but dealers report that the volume of business is growing steadily. A number of Montreal yards report that they have made a larger turnover during 1914 to date than during the corresponding period of 1913. The outlook for the export trade with Great Britain is not very bright, according to recent advices from England. This situation will be rendered still less satisfactory by an increase in railway freight rates from the Ottawa district, averaging about one cent a hundred pounds, of which the railway companies have given notice.

Reports from Boston state that nearly all the large producers are asking \$25 for spruce dimension, although some sales are still reported at \$24.50. Backward spring weather is inducing retailers to hesitate about their purchases. It is expected, however, that the \$25 basis quotation will continue. The movement of random is slow, but a firmer tendency is reported. Quotations are mentioned at \$21.50 for 2 x 3 and \$22.50 for 2 x 4, while for 2 x 5, 2 x 6, and 2 x 7 the price ranges from \$20 to \$21. Sales of 2 x 8 are reported at \$22. The demand for 2 x 10 and 2 x 12 is dull, quotations being at \$24 to \$24.50 and \$24.50 to \$25 respectively. Spruce covering boards are hard to sell at \$22.50. The demand for No. 2 matched spruce boards is quiet, the price ranging from \$24.50 to \$25 or lengths of 10 to 16 ft. Since Canadian beaded spruce boards have been refused free entry by customs officials, it has been easier to maintain the price. The outlook for spruce at New York is rather uncertain, although most of the yards have much lower stocks than is usual at this time of year.

The hardwood trade at Boston is a little more active than it was a few weeks ago and prices are steadier. Plain oak, one inch, is selling at \$61 to \$66 and maple at \$33 to \$40. Other quotations are:—brown ash, \$58 to \$60; basswood, \$43 to \$45; red birch, \$54 to \$56; sap birch, \$44 to \$47; cherry, \$95 to \$100; white quartered oak, \$88 to \$92.

It is difficult to report upon the value of lath at Boston. Some

business, however, is going on steadily at \$4.25 for 1½-in., while \$4.15 and \$4.10 are also reported. The demand is not so good as it should be at this time of year. The usual quotation for 1½-in. lath is \$3.75 to \$3.80. Shingles are moving slowly. Standard extras are quoted in most cases at \$3.65 and white cedar clears at \$3 to \$3.25, with second clears at \$2.75 to \$3. Supplies of inferior grades are said to be heavy.

Great Britain

Considering the time of year, the lumber trade in Great Britain is comparatively brisk. A number of rumours are current regarding heavy reductions in prices, some of them being based upon facts. Nevertheless, prices in general are about steady and the tone of the market continues strong. Throughout Great Britain the wood market is probably in as flourishing a condition as in any other country, and in view of the general feeling that the commercial depression will only be of short duration, reduction in f.o.b. values are not expected to be permanent, even for the present season. No further drop in prices is expected.

The Timber Trades Journal, of London, in its latest issue, says:—

"As far as the timber business is concerned, it is well known that the trend of the Canadian export trade is in the direction of a curtailment of supplies to the United Kingdom, largely explained by the steady expansion of the domestic and American demand. This position is further emphasized by the statistics just issued for 1913, which show that with the exception of pine, birch and elm there is no increase in the export to the United Kingdom, while the production of manufactured wood goods for this market is appreciably less, doors, etc., being down more than half in value as compared with the preceding year. It is noteworthy that the mahogany received from this side amounted to 397,821 feet, a little more than during the preceding year. On the other hand, Canada's export of timber to the United States showed no diminution, but a slight increase, and the import from that quarter indicates a marked increase upon many items, notably in oak, pitch pine, shingles," etc.

At London, the trade is in a rather complicated position, holders of stock complaining of the difficulty in making satisfactory sales, while, on the other hand, deliveries week by week maintain their totals. For the week ending March 21st, the deliveries amounted to 3,211 standards as compared with 2,465 standards during the corresponding week of last year.

A little more activity is reported at Liverpool in connection with forward buying of spruce deals, several cargoes having been placed at figures somewhat higher than present prices for liner parcels. Liner parcels are arriving more freely than importers desire and the prices obtained have suffered. The spot market at Liverpool is steady, but the volume of trade is small. The demand for Quebec pine deals is limited. The principal importers are apparently content to allow their Ottawa purchases to remain awaiting shipment until the market condition is more promising. Transactions in birch on c.i.f. terms are light.

United States

Reports upon lumber trade conditions in the United States continue to vary greatly according to localities; weather conditions, crop prospects and financial and industrial situations having a great deal to do with individual reports. In the southern pine trade a more hopeful condition is reported. Building operations in many of the large cities are progressing at a seasonable rate and in some cities are expected to surpass those of last year. The northern pine trade is fairly active, but the demand cannot be said to be more than moderate. Prices of northern pine are steady. The hemlock trade is fair with prices unchanged. The volume of new business for hemlock in the east is light, although there are good prospects for the building demand. Retail yard stocks of hemlock in the upper lake country are reported to be low and a good demand is expected with the opening of navigation. Irregularity is reported in the demand for hardwoods, which apparently is not yet up to the volume that was expected earlier in the year. Prices, however, are firmly held in general. Plain oak is moving steadily and there is a fair demand for ash. Northern hardwoods remain very firm. Birch logs are said to have been sold in Wisconsin as high as \$25 a thousand on cars, which is from \$2 to \$3 higher than the prices of a year ago. Elm is also about \$2 higher than last year. One-inch maple is very firm and there is a better demand for basswood than there has been for some time.

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Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

St. John Trade Continues Quiet

St. John, N.B., April 7; (Special to the Canada Lumberman):—There is very little change in the situation at this point up to the present. The spring weather is very slowly warming up, the ice still remains solid in the rivers and lakes and unless warm rains set in immediately, it looks very much as if the lumber mills at St. John will not get in full blast before the first of May, although last year the first of April practically saw them all under steam and sawing. Messrs. Stetson Cutler & Company have been operating their two mills for about a week. Messrs. Murray & Gregory's mill began operations this morning; these are the only mills to start to date.

Local business from the yards and factories has not increased to any great extent, owing largely to the cold backward weather, but business can be said to be better than it was. Very little heavy outside work has yet begun. Prices for refuse, and low grade stocks which are used locally are somewhat higher than a year ago, but the advance is unlikely to continue when the mills start, as this time of year always sees the yards short of low grade stocks and a larger price is paid. Eleven dollars per thousand is now being paid at the mills for cuts of refuse boards, planks, scantlings and deals. Merchantable spruce boards, 4 in. and up wide, are bringing about \$16 per thousand at the mills, for factory and local uses. Clears are selling at about \$25 per thousand.

Both the English and American markets are about marking time, the English market being much the better of the two, but stocks there are very heavy. This will not have any great effect upon the mills which have sold their cuts ahead for the season, as the buyers are well able to carry the stocks if necessary. This we hope will not be the case. The cuts, as explained some time ago, were sold at \$17 to \$17.50 per thousand superficial feet for the ordinary English specification.

In the American market there is practically no business to be found, and therefore no market price has been established. In New York business is even worse than in New England. No stocks of any kind are moving forward from St. John to the American market, with the exception of a few laths. These are being sold at about \$3.75, New York.

Freights to the English market are very low, ranging from 35s to 37s 6d, with more tonnage offering than is needed. To American ports \$3.00 per M. is the price to New York.

Conditions for driving look very favorable up to date. Plenty of snow remains at river and the cold weather is preserving it, so that it has not wasted to any extent.

The quantity of logs to be driven to booms of St. John River Log Driving Company this year will be about 54,000,000, should all get into boom limits. The company have not quite finished their arrangements for driving the lower corporation as yet.

Prices for logs are not so high as they were some time ago, as the farmers here hauled in more logs than it was expected they would get earlier in the season.

Montreal Trade Improving Gradually

Montreal, April 11th (Special to the Canada Lumberman): Although the season is backward, with a consequent tendency to retard building, lumber dealers state that business is satisfactory. It is picking up in a very encouraging way, and several local yards report a larger turnover as compared with the corresponding period last year.

The building returns for the first quarter of the year indicate that more permits are being taken out for residences, and that there is a decrease in those for the larger structures. For the three months the total value was \$1,855,196, as against \$1,867,847 in 1914. For last month the permits were for \$959,496.

It will of course be some time before navigation opens, but advices from England are not optimistic as to the current year's export business, particularly as regards pine. The proposed increase in railway freights from the Ottawa district will be an unfavourable factor in this branch of the lumber trade, as it will mean an added charge to goods which already have to meet with keen competition in the open markets of Great Britain.

The railway companies have given notice of an advance of lumber freights from Ottawa rate points, which materially affects Montreal. In order to meet water borne competition the companies have a lower tariff during the summer months, water carriage being always cheaper than railway carriage. In 1908 the rate was increased about

a cent per 100 pounds, and the companies now seek still higher charges on the ground that the cost of maintenance has risen. The new rates apply to both domestic and export business, the increases varying from ½c to 2c per 100 pounds, with an average of 1c per 100 pounds.

There is a good demand for chemical pulp, and some of the Canadian mills are oversold. The ground wood market is slow, orders from the United States being scarce. In the eastern portion of the United States the water conditions are very good, and until there is an alteration in this respect, Canadian mills will not receive much business from over the border. Newsprint is a fairly good market. Advices from New York state that contracts have been renewed at last year's prices.

Ottawa Trade Again Active

Ottawa, April 6th, (Special to the Canada Lumberman): The anticipated revival in trade has arrived with the coming of spring. Practically every lumberman in this district reports that business within the last two weeks has picked up to an encouraging degree. Several American buyers have visited local dealers and have made large purchases.

Locally, indications are that the coming season will be a record breaker. Last month there were 44 building permits issued in the city to the total value of \$307,800, as against 38 permits for the same month last year, the value of which was \$194,489 only. There have been no alterations in prices during the present month.

Practically all the men are now out of the lumber camps and the mills are in readiness to begin operations at any time. As soon as the ice is out of the rivers, driving will commence, which will be around April 20th. If nothing unforeseen happens, most of the firms throughout the Ottawa Valley expect to make a considerably larger cut this year than last. Nearly all of J. R. Booth's large cut is sold and the balance will be, before many weeks.

Export firms are preparing for the opening of navigation on the St. Lawrence, which will be towards the end of the month, though the insurance companies do not put their policies into effect before May 15th.

The sash and door factories throughout the city are exceptionally busy after a rather lengthy period of dullness. The Estate James Davidson now have 250 men working nine hours per day. Next week the ten-hour day will commence for the summer season. This firm is filling several large orders for boxes. At the mill in Davidson, Que., millwrights are putting the machinery into shape ready to start work about the 20th of April. The cut there this year will total over 15,000,000 feet. Two new machines have just been laid down in the city factory, one a new 12-ton veneer press, made by the Francis Machine Company, of Rushfield, Indiana, and the other a box planer, made by Baxter D. Whitney & Sons, Winchendon, Mass. Mr. Grant Davidson, general manager of the Estate Davidson, says that plans are being prepared for displaying in the north frontage of the factory, portable houses, refrigerators, etc., made by the firm. It is proposed to put in four big plate glass windows, each 18 feet long and 10 feet high. The products of the factory shown in these windows can be seen plainly by passengers coming out from the Broad street station of the Canadian Pacific Railway.

Mr. John R. Booth, head of the famous lumber firm that bears his name, celebrated his 87th birthday at his home yesterday. Had his birthday not fallen on Sunday this year, he would have celebrated it as he has most of his other birthdays by working. Although he met with a severe accident at his plant a few months ago, he is now able to get down to the mills at the Chaudiere Falls every day on crutches.

Mr. Gordon Edwards, of the W. C. Edwards Company, returned home last week after attending the annual convention of the North Carolina Pine Association, held in Norfolk, Virginia.

Sir Henry Egan, head of the Hawkesbury Lumber Company, and Lady Egan, are spending a vacation at Hot Springs, Va.

St. John Log Driving Company's Meeting

The annual meeting of the St. John River Log Driving Company was held at Fredericton, N.B., on April 2nd. It was reported that the total quantity of lumber to be driven and rafted by the company this year would be about 61,000,000 feet, including the cut on the Tobique. The president stated that it had not yet been decided whether the company would handle the river drive by itself or let it out.

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OF THE TRADE.

Black Walnut

Much has been written as to the way in which mahogany is taken from the woods, the way the trees are located and felled, and the way hewn logs are gotten down to the waterways, and from there to the ocean. Very little has been said, however, regarding the painstaking work necessary in selecting the raw material and producing the beautiful pieces of furniture made of our own domestic walnut. Ten or fifteen years ago walnut in furniture, stair work, and interior trim was considered the height of fashion and luxury, but possibly because of the inability of the wood finishers at those times to create the bright, cheerful finishes which the average home builder now demands and possibly also to a degree because of the increasing prices of walnut, this most desirable wood gradually lost its popularity until up to a few years ago it commanded but a very small proportion of the prestige which it formerly enjoyed, says an American contributor. The character of the wood used in the ordinary run of various types of household furniture does not necessitate any unusual effort as far as the selection and manufacture of the wood is concerned. As a general thing the logs are picked up by men and concerns who make a business of buying walnut logs in small lots and disposing of them to concerns who manufacture them into lumber and veneers. For this purpose the ordinary run of plain walnut is used without any special regard to figure or curl. The wood used for this purpose is merely in the form of logs and is sold as such, and from them manufactured into lumber and veneers for furniture and similar purposes. However, there is a splendid demand which is never quite taken care of for this wood in the most luxurious form, and that is the wood with the beautiful mottle; the so-called figured and curly walnut which commands excellent prices and is highly thought of for all character of high-class cabinet work. In fact, it is difficult to find any character of wood growth which shows a more beautiful surface when properly finished than this highly figured curly stock. It is in this line of work that the walnut log men take the greatest pride. Indeed, it is necessary that these men have a wide and varied experience that they may make a success of the accumulation and disposal of curly and figured stock.

While the plain wood is gathered and sold merely in the form of logs, the curly and figured stock, on the other hand, is almost always secured from the sources of supply in other forms. The figure and the curl are the result of natural freaks in the growth and formation of the wood. As a general thing instead of being found in the logs, they are found in the stumps or in the "burls," which to the layman in the ordinary form present an appearance about as attractive as an ultra-mature tree toad. The experienced walnut man, however, quickly determines whether or not such a "butt" as he calls it will develop figure or curl, when he has gone so far as cut the tree. He takes great pride in his ability to tell in a general way just what character of figure each stump that he selects will develop in the veneer or lumber. It is not to be inferred from this that the walnut man merely goes through the woods, looks at the walnut tree, and is able to ascertain exactly for what use it is best suited. As a matter of fact there are usually but one or two trees in every hundred cut which develop any figure worth while that will justify their being placed in the class of figured walnut.

The work of selection of figured butts is exceedingly tedious, and when the walnut man discovers one which he considers marketable, that is, a butt that shows that it possesses a strong suggestion of figure or curl, he has it shipped to his assembling yard. Here it is split and the bark and sapwood trimmed off pretty closely to the heartwood. In the figured stock the sapwood is of no commercial value. Various methods are used to preserve the butts after they have been prepared in this way to minimise checking and other deterioration. In this connection one of the oldest of the walnut assemblers of America says that after he has split and trimmed his butts he buries them in sawdust immediately, which procedure keeps them in a most excellent condition for an indefinite period. The veneer manufacturer is a man interested in the purchase of these fancy butts, and as soon as he hears of any special offerings he makes a journey to the assembling yard and makes his purchases. The butts are then shipped to the veneer plant, where they are sliced up into the required veneer which is further matched up in the piano manufacturer's panel plant for high-grade piano facing. As suggested, the proper selection of walnut in the stump is really more of an art than a cold-blooded business proposition. A man has almost to be born to this work and to pass through years of training in order that he may be able to recognise the beauty he is seeking when he finds it.

Yellow Poplar and Its Uses

There is more lumber produced from yellow poplar than from any other southern hardwood except oak. The commercial range of the tree is restricted mainly to the southern Appalachian mountains of the Virginias, Carolinas, Kentucky, and Tennessee, where it grows to be more than 100 feet high and over 5 feet in diameter. Some specimens have been found in Virginia nearly 200 feet high and 10 feet through.

The wood itself has the same general characteristics as that of white pine, and its range of uses is about the same. Each is utilized for almost anything not requiring great strength or toughness.

The qualities which favor the extensive use of poplar, says the report, are its straight grain, its lack of odor, the readiness with which it takes paint, and the ease with which it can be worked. Doors, paneling, packing boxes, type cases, drawers, kitchen, woodenware, and toys are made largely of yellow poplar. In Tennessee wooden mixing bowls are turned out in sizes up to 4 feet in diameter from one piece of wood. Yellow poplar stands well in situations exposed to the weather, as in pumps, outside steps, shingles, and fencing. It is not durable in contact with the soil, though it can be readily treated with preservatives.

Estimating and Figuring Mill Waste

By Chas. Cloukey

The following letter, referred to me for discussion, opens up a subject full of interest to mill operators, and while many of them are still groping for the light, there are others who claim to see their way clearly; but read the letter first:

"I should like to know if any manager of a wood-working mill has made a study of the best method of finding out correct waste on lumber used in sash, doors, blinds and interior trim. Probably some one has a system in practical use that is giving fine results; if so, it would be valuable to the trade.

"We are generally getting so that we have accounting systems that give overhead charges down to one-tenth of 1 per cent., but in the matter of material, which is by far the most important item, we are doing more or less guessing. I think most of us are making tests of occasional orders, and after the lumber is brought into the mill and cut into pieces and lengths required, we make allowance for pieces and strips left over, which we expect to use again. This cannot be an exact basis, as we all know some jobs cut to better advantage than others, and some waste will work into other orders and some finally goes into firewood. Most of us are basing our estimate of waste on these occasional tests, and I think, by a careful study of the subject with a systematic method, it can be improved on.

"Some firms charge to the job all the material brought into the mill, regardless of waste, but I do not think this is right. Probably we should not figure costs so closely on our product that we should get much closer than either of the above-mentioned methods, but I do think we should at least know exactly, as the records will help us in many ways in knowing the proper grades to buy and will also show how efficient our cutters are. This cannot be obtained by occasional tests, but only by keeping records of all the material used for an extended period.

"The difficulty is going to be in getting the waste on different kinds of lumber when different grades are used of one kind, such as pine, for instance, where No. 1 cuts are used for doors and No. 3 for sash and blinds. The waste from No. 1 might be used with No. 3 for sash, and the clerk, in figuring up the cutting bill of sash, would not know whether to credit it as coming out of No. 1 or No. 3 cuts. This might be accomplished by crediting to No. 1 or No. 3 cuts what is known to have come from either of these grades, and that about which there is a question could be credited to miscellaneous account. I think this would be such a small proportion of material cut, it would give very nearly accurate figures.

"Would it be possible to apportion the waste credited to the miscellaneous account to the different grades, at the end of the year, according to the proportion of each kind used? Again, is it possible to work the whole matter of waste out on the cost-of-lumber basis? These are the two important parts of the proposition I haven't been able as yet to work out clearly myself, and I would like to hear some discussions from others on these two points, also the waste proposition as a whole."

It has been the writer's privilege to become acquainted with quite

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a number of mills in different parts of the country, and my observations have been that with the same quality of supervision the percentage of waste is about the same in all mills doing a regular mill work business. By this I mean mostly odd and special work, but still quite a little in stock sash and doors, moldings, casings, frames, fixtures and so forth. The efficient means of keeping down the waste percentage is, first, careful selection of the best lumber at hand for the job; second, intelligent cutting, and third, a comprehensive system or plan for handling the scrap pieces worth saving for future jobs.

Taking up the matter of lumber, we find that the bigger stocks always cut cheaper material, both as to lumber and time. I do not mean that 10,000 ft. of one item will enable a cutter to get out 2,000 ft. of cuttings any cheaper if the pile is all of one width and length, but if it is divided up into half a dozen widths and lengths, it stands to reason that the cutter will spend less time and have less scrap left.

As it is not always possible for a mill to keep on hand the most desirable assortment of lumber, perhaps on account of the way the hurry work comes in or on account of limited capital, it may be true that one mill can operate on a smaller percentage than another.

The point of cutting cheaper lumber in order to raise its grade is one well taken, but it is also one that should be very carefully watched. The extra waste and extra work in cutting will go a long way in evening up the price, especially if the number of pieces involved is small. So let us keep this point in mind when we come to adjust our percentage of waste.

Another feature of importance in keeping the waste down is the variety of the work handled by the mill. We often get a bit of published advice along this line, but unfortunately we are not always in a position to use it. Just the other day a writer advocated working scrap into surveyors' stakes—very good advice for the boom towns, but not much for the old ones. We got out some 25,000 stakes one summer and nearly as many two other summers, but by that time there had been eight sections of prairie staked off into town lots and the stake market took a permanent slump.

The reader must understand that we are not talking about the speed of cutting now, but about the percentage of waste in the lumber itself. However, the time of cutting enters into it indirectly, for if the cutter spends too much time in holding down the waste item, he may waste more in time than he saves in lumber. This also applies in cutting to raise the grade.

The best plan for handling scrap lumber for which there is no immediate use is divided into two parts. The one part deals with strips and consists of ripping them to stated sizes for stops, quarter-round, base shoe, glass bead, small panel molds and the like and racking them up in a convenient manner. Never pile strips out in a promiscuous heap and expect to get anything profitable out of them. Rip them up every day or two and burn or sell what you cannot use.

Scrap cuttings are much more difficult to handle if they are put in horizontal piles; in fact, piles of scrap are uniformly unprofitable. The scrap shed or room should be arranged to stand all the material on end. If the pieces are longer than 6 ft., they should be returned to the lumber piles. If they are shorter, they should be stood on end and ranged in single rows from the wall out about 4 ft. If the tiers are wider than that, it will be difficult to handle them without letting some of the outer pieces fall down and become disarranged.

Any one who will try this plan will find that the scrap-pile will require about one-tenth of the space it will occupy with the pieces laid flat. The reason that it will be smaller is because it will be used up closer. You can go into a scrap room with this arrangement and at once see both sides of any piece without disarranging the others, or without even picking up the piece you are looking at.

We all know how discouraging it is to see the end of a piece just like we want and dig it out, only to find that it is too short for our purpose. Then we tackle a piece that we can see is long enough, but when we pull it out we find it has a wind-shake, knot or streak in the middle of it. We are wasting valuable time, and so we go to the lumber pile, where we can see what we are doing, and let the scrap lie where it is, to be buried still deeper. If there is a fuel value to the scrap made in the mill, that part fitted for fuel should be converted at once. If it has a greater value on the market as stovewood, it should be prepared for that commodity at once and delivered or stored.

The writer of the letter above has practically outlined one of the approved systems of figuring lumber in mill work, and it was by such simple, comparative means that one of the most up-to-date concerns in the country arrived at a fixed per cent. to add to the amount of lumber appearing on the cutting bills. However, it seems to be the practice of more mills to keep track of the lumber brought in on each job, or at least try to do so, and it would seem at first thought that this is the only true way of keeping account of the material in a job. But we run up against so many modifying phases of the subject that it does not look so simple after all.

The yard man will bring in what he thinks will cut the job, but the cutter will turn down about 25 per cent. of it as unfit to cut. This

amount must be replaced with enough to finish the job, and then it is found that about 5 per cent. of the amount has been cut wrong and has to be replaced. The machines spoil 2 per cent. of it, and, on account of the peculiar sizes, about 20 per cent. of the amount brought in is taken out in strips and cuttings. Clearly this is not a representative case.

The concern above referred to found that a uniform addition of one-sixth fitted its case very satisfactorily. This covers all waste in errors as well as in sizes and defects, and is added to the money value of all lumber appearing on the cutting bills of the order. Of course, it would add greatly to the accounting, to add the waste to each item or to each different kind or grade of lumber as the figuring progressed, so it is added after the total value of the figured sizes is found.

It has been the practice of several mills coming under my notice to use a 10 per cent. waste figure, and I am inclined to believe that it can be done under favorable circumstances. By this I mean good stocks of well-assorted lumber, efficient cutting, good scrap management; and let us not forget that the scientific arrangement of cutting bills is a large factor in keeping a low percentage of waste.

When we speak of waste the term should be one of comparison, and should apply to the foot value of lumber and not to any of the actual material. For instance, all the material in a plank should conserve some purpose. It may be worth 3c per foot and produce cuttings worth 4c or cuttings worth 3c and core stock worth 2½c after it is glued up. Still there are some knots, strips and sawdust left which have a fuel value, either in the shop or out of it. The only way to arrive at this value is to get it for a given time, as suggested, and credit it back to the lumber account at the end of the year.

The mention of glued-up core stock, crating materials and the like, which are really a converted waste, brings to mind a complication of the overhead expense which, with many others, makes me think that any planing mill business claiming to have figured overhead expense to within one-tenth of 1 per cent. of perfection has surely overlooked something. But as this is not a discussion of overhead, I will only say that when the scrap is converted into core stock and figured on the billing sheet at 2½c per foot, it is not good bookkeeping to charge the labor thus expended to overhead expense.

Some mills put all of the crating lumber in the overhead account. This might be alright if the crating was all bought by the car at a known price, but when the bulk of it is the poor edge of a common board ripped off on time charged to orders and resawed on overhead time, it is a sure thing that it will affect the figuring for the year to lose the entire crating lumber in the overhead account. In the process suggested by the letter it would come out as waste, or part of the difference between the lumber bought, the lumber used as per the cutting bills and the lumber shown by the inventory.

With mills doing but little crating this item might not mean much, but with those using several cars every year it would figure as that much waste to increase the percentage to be added to the cutting quantities. So, if a mill is setting about to make a rate of its own, based on several years' experience, it is well to make a complete analysis of the way the lumber is finally disposed of, and then the rate obtained will be of real value.

In our mill the cutting bills are made in quadruple, using carbons and sheets of four different colors. One particular sheet is the office copy and does not leave the accounting department. The others are put in the mill and one goes to the yard boss. The other two are kept in the mill, and if the work is sent out K.D., the yard bill is sent along to the customer with the goods. Each workman has a personal check for the items worked by him, which he puts on the bill as he does his part—but that is getting away from the subject.—The Wood-Worker, Indianapolis.

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The Herbert Morris Crane & Hoist Company, Limited, Peter Street, Toronto, have issued an interesting bulletin "B3" descriptive of the Morris Traveling Spur-Gear Chain-Block. The bulletin contains interesting illustrations which draw attention particularly to the snug construction of these travelling lifting-gears. When an ordinary chain-block is suspended by means of a hook from the cross-bar or eye of an I-beam trolley, much head room is wasted which might otherwise be used to great advantage. Morris Spur-Gear Blocks are made in a great many different types, each arranged for a specific set of conditions for which it is peculiarly adapted. A high speed of lifting is obtained by using a small gear ratio, which is only rendered possible by the extreme accuracy of the work put into the cutting of the gears and the setting out of the steel side plates. The Morris Traveling Spur-gear Chain-block is built right into the trolley so that no head room is wasted. This combined lifter and shifter has solved many hard problems and is well worth investigation by all who have any difficulties to overcome in regard to moving heavy material in their plants.

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EDGINGS

Ontario

Mr. W. Jones, representing a firm of German shipbuilders is on a business trip in Southwestern Ontario, buying a large quantity of select hardwood.

The ratepayers of Orillia, Ont., passed a by-law on March 30th for granting a loan of \$50,000 to J. R. Eaton & Sons, Limited, to assist them in the erection of a woodworking factory which is to cost \$50,000.

The Simpson Planing Mill Company, Limited, has been incorporated with a capital of \$40,000, with head office at Toronto, Ont. The provisional directors are A. Rhind, J. Magee, C. W. Wills, E. J. Cluskey and H. B. Duthie, all of Toronto, Ont.

The Maple Leaf Lumber Company, Limited, has been incorporated with a capital of \$40,000, with head office at Toronto, Ont. The provisional directors are E. F. McDonald, B. P. Fitzpatrick, J. M. Adam and A. C. Rutherford, all of Toronto, Ont.

The partnership heretofore carried on by Wm. J. Lovering, Geo. Wilfrid Boake and Ellwood W. Boake, under the firm name of the Yonge Street Lumber Company, at Toronto, has been dissolved by mutual consent. The business will be carried on in future under the same name by Ellwood W. Boake.

The Pembroke Lumber Company, Pembroke, Ont., have sold their timber berth, known as No. 1 and 2 Jocko to J. J. McFadden, Renfrew, Ont. The company state that they will start their mill operations at Pembroke on the first of May with the finest average of logs which they have ever taken out of the bush.

The Canadian Handle Company, Strathroy, Ont., have awarded a contract to John J. Smith, Strathroy, for the erection of a woodworking factory at a cost of \$50,000. The building will be 180 x 40 ft., of brick and fireproof construction. W. H. Braddon, 546 King Street, London, Ont., is interested in the company.

Ferguson & McFadden's sawmill at Tomiko Village, 27 miles from North Bay on the T. & N. O. Railway, was totally destroyed by fire on April 2nd, the loss being estimated at over \$50,000. The large stock of lumber in the mill yard was saved, although the residence of Mr. E. L. Bucknam, adjoining the mill, was destroyed.

The Andrews Lumber Company, Limited, Sault Ste. Marie, Ont., have nearly completed the erection of their mill at Alona Bay, Ont., and expect to have it in operation in the near future. The plant will turn out about 4,000,000 feet of hardwood, spruce and pine lumber fully half of which will be birch, in addition to a quantity of pulpwood, cedar ties, cedar poles, and white pine board timber.

The Abitibi Pulp & Paper Company's paper mill at Iroquois Falls, Ont., will probably be ready for operation on June 1st. The pulp machinery will be operating in May. The paper mill will be 500 feet in length and nearly 300 feet in width. It will be of solid concrete construction. 40,000 cords of pulpwood are already piled on the banks of the Abitibi and Black rivers and their tributaries awaiting to be floated to Iroquois Falls.

A bill has been introduced into the Ontario Legislature by the Hon. Wm. H. Hearst, Minister of Lands, Forest & Mines, for the purchase of the timber limits of the Pembroke Lumber Company in the townships of Fitzgerald, White, Edgar, Bronson, Stratton, Barron, Master & Guthrie, amounting in all to 306¾ square miles. The price to be paid by the government is \$185,000. The territory will be added to the Algonquin Provincial Park.

Eastern Canada

Villeneuve, Limited, have opened a new yard at St. Jerome, P.Q.

Coggel & Long, Sackville, N.B., have commenced the erection of a woodworking factory.

The next annual convention of the Canadian Forestry Association will be held at Halifax, N.S., on September 2, 3 and 4.

P. Beauchemin & Fils, lumber dealers, St. Paulin, P.Q., have been registered. The members are: P. Beauchemin, A. & J. Beauchemin.

Thos. E. Fee & Company, lumber dealers, Montreal, P.Q., have been registered. The members are: Thos. E. Fee, H. Palarde and E. A. Fee.

According to a despatch from London, England, Mr. J. E. A. Dubuc has obtained capital for a very large extension of the plant of the Chicoutimi Lumber & Pulp Company, Lake St. John, P.Q.

Price Bros. & Company, the well-known paper and lumber people, are erecting a sawmill at St. Gedeon, Lake St. John district, for the purpose of cutting up their large logs. The pulpwood will go as usual to the existing mills.

A new company, known as Pulp & Lumber, Limited, has been incorporated, with head office at Montreal, to carry on the business of pulp wood and lumber manufacturers. The provisional directors are H. Lampard, engineer, Westmount, and H. M. G. Belew and B. C. Bellew, of Montreal.

Lynch and Bruneau, Limited, have been incorporated with a capital of \$50,000, with head office at L'Epiphanie, Que., to carry on business as manufacturers of boxes, crates, etc. The provisional directors are W. Lynch, and M. Bruneau, of L'Epiphanie, Que., and J. O., E. and H. Mathieu, of Montreal, Que.

The Ouatichouan Falls Paper Company, Ouatichouan, Que., have drawn up plans for alterations to their pulp mill, at a cost of \$20,000. The alterations will include the installations of wet machines, grinders, etc. J. E. A. Dubuc is manager and the engineers in charge are Grenon & Lavoie, of Chicoutimi, P.Q.

The Brompton Pulp & Paper Company, East Angus, P.Q., will erect a new paper mill for the production of news paper. The contract for the machinery has been awarded to J. H. Horne & Sons Company, of Lawrence, Mass.

The buildings will be located on the west side of the River St. Francis and will be 72 x 444 ft., two storeys high, of concrete, brick and steel with a granite roof. The power house adjoining will be 52 x 108 feet, and power to the extent of 1,000 h.p. will be developed. The equipment of the mill and power house will be thoroughly modern and up-to-date.

The new sulphite mill to be erected at Bathurst, N.B., by the Bathurst Pulp & Paper Company, will be designed by G. V. Steffanson, of the Canada Paper Company, Windsor Mills, P.Q., who is widely known among pulp and paper manufacturers as a successful designer and constructor of pulp and paper mills.

P. N. LeBlanc, Moncton, N.B., is enlarging his woodworking factory, with a view to having more working space. The equipment is not being increased. Mr. LaBlanc reports that he is "preparing for an enormous season." He is installing a draughting department and is anxious to hear from manufacturers of building materials in general.

J. T. and C. Donohue, of Quebec, who have bought all the stock of pulp wood on the limits and in the yard of the East Canada Power and Pulp Company at Murray Bay, Quebec, will put the mill in operation next month. The plant, which has been idle for over a year, owing to liquidation proceedings, will employ over three hundred men.

The Fraser Brook Lumber Company, Limited, Fraserville, P.Q., which was recently incorporated with a capital of \$100,000, is the owner of an attractive limit, 15 miles square on the Matapedia River, at a distance of three miles from the I. C. R. The limit is thickly wooded and has never yet been cut, or injured by fire. It is well watered for driving purposes and in other ways presents a very interesting proposition for the company which intends to operate upon it.

J. O. Gilbert & Son, lumber and pulp wood manufacturers, Bishop's Crossing, P.Q., report that they intend to build a new plant to take the place of the one they recently lost by fire. The plant will be built and equipped during the summer months and will include an up-to-date sawmill, shingle mill, lath mill, and a plant for dressing lumber, and equipment for manufacturing hardwood flooring and utilizing mill waste. Details of the plant have not yet been arranged, but will be announced later.

Western Canada

McClellan & Balfour, sash and door manufacturers, Edmonton, Alta., have been succeeded by A. Galbraith.

The Stern Lumber Company, Limited, has been incorporated with a capital of \$10,000, with head office at Donalda, Alta.

The Interior Hardwood Finishing Company, Limited, has been incorporated with a capital of \$50,000, with head office at Victoria, B.C.

The Western Canada Lumber & Building Company, Limited, has been incorporated with a capital of \$300,000, with head office at Saskatoon, Sask.

W. J. Milford & Company, box manufacturers, Winnipeg, Man., contemplate the erection of a plant at Edmonton, Alta., which will give employment to one hundred hands.

Sealed tenders are being received by the Minister of Lands of British Columbia, up till noon on May 6th, for the purchase of pulp license X45, to cut 9,400,000 feet of timber, adjoining lot 2242, Pryce Channel, Range one, Coast District. Three years will be allowed for the removal of the timber. Particulars may be secured from the Chief Forester, Victoria, B.C.

Tenders are being received by the Winnipeg Board of Control, until April 21st for five hundred 40-ft. and one hundred 45-ft. cedar poles. Specifications may be seen at the office of the engineer, Mr. J. G. Glassco, 54 King Street, Winnipeg, Man.

The Hunting-American Lumber Company is endeavoring to make arrangements for the erection of a sawmill, costing about \$50,000, on a 4½ acre site near Eburne, B.C. The undertaking depends upon satisfactory arrangements being made with the city council in regard to a mortgage which it already holds over the property. The Hunting-American Lumber Company already operates a mill at Vancouver.

The forest service of United States collected 40,000 pounds of tree seed last year for use in re-afforestation work. The total area reafforested was about 30,000 acres.

The Mountain Lumber Manufacturers' Association have moved their offices from Calgary, Alta., to Nelson, B.C. All communications in future should be addressed to the latter city. The secretary of the Association is Mr. A. E. Frank.

The British Columbia Forestry Branch is anticipating an unusually early dry season this year and fears that the danger from fire will be much greater than other years. Extensive measures are being taken to cope with these conditions.

The Smart-Turner Machine Company, Limited, Hamilton, Ont., are supplying the Goderich Lumber & Milling Company, Goderich, Ont., with one of their Duplex Pumps, and the Hinde & Dauch Paper Company, Toronto, Ont., with one of their Triplex Power Pumps.

A summary of the revenues and expenses of steam railroads in the United States for the month of January, 1914, shows a decrease in total operating revenues per mile of 7.5 per cent. and a decrease in operating expenses per mile of 3.3 per cent. The net operating revenue per mile decreased by \$56 or 19.5 per cent. as compared with January, 1913, which was 40 per cent. greater than for January, 1912.



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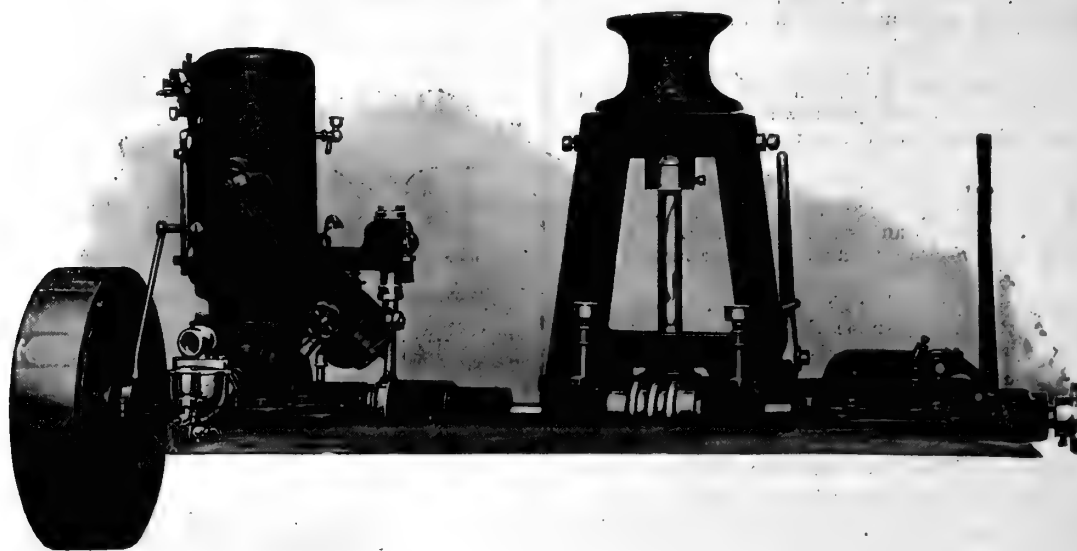
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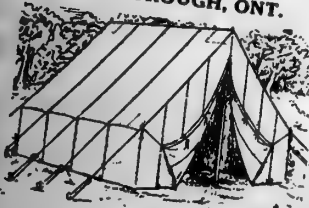
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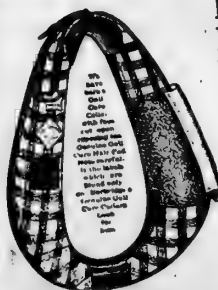
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Keystone Saw, Tool, Steel and File Works

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Branch at Vancouver, B.C.

The Mark of Perfection
in Saws



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LEATHER BELTING



is the result of extensive chemical researches and the testing of many different tannages of leather.

Where abnormal external conditions exist Spartan Belting should be employed, as the specially tanned leather and the special cement used in its construction resist the injurious effects of water, steam, oil, gas fumes, and heat generated by excessive pulley friction.

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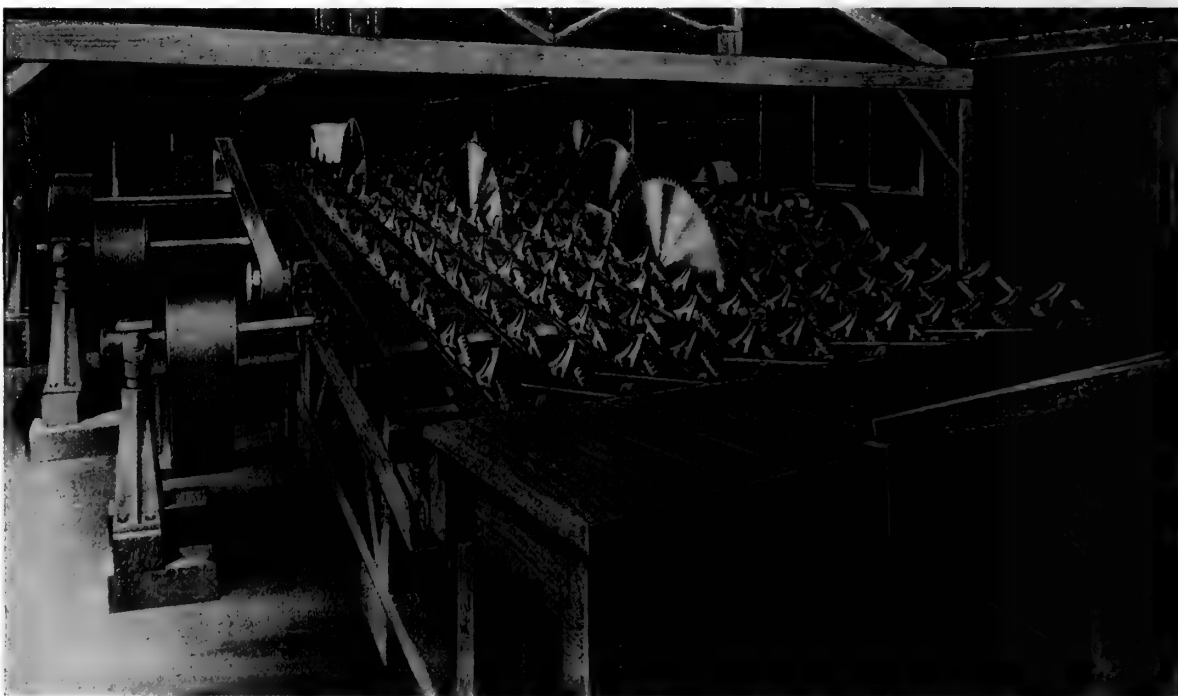
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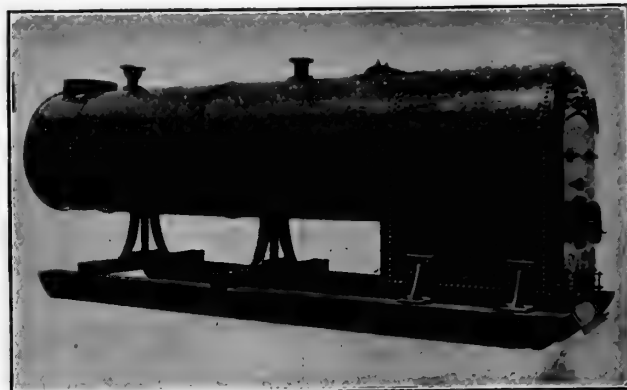
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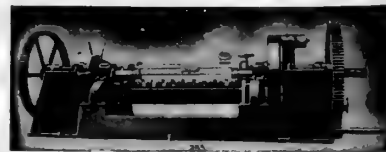
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"Goodhue Belts" stretch less than any other belt by 15 to 25 per cent. This quality effects a great saving because it is unnecessary to be continually shortening the belt to keep it taut.

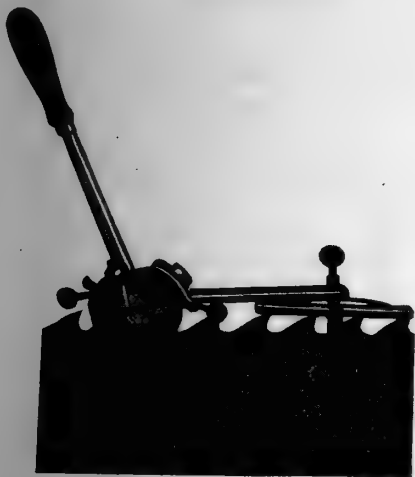
"Acme Waterproof" brand is made for the wet places in a mill and will give a remarkable service under the most trying conditions. When you buy a belt—buy a Goodhue. Prices and particulars on request.

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A New Swage The Best Yet

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View 1.



View 2.

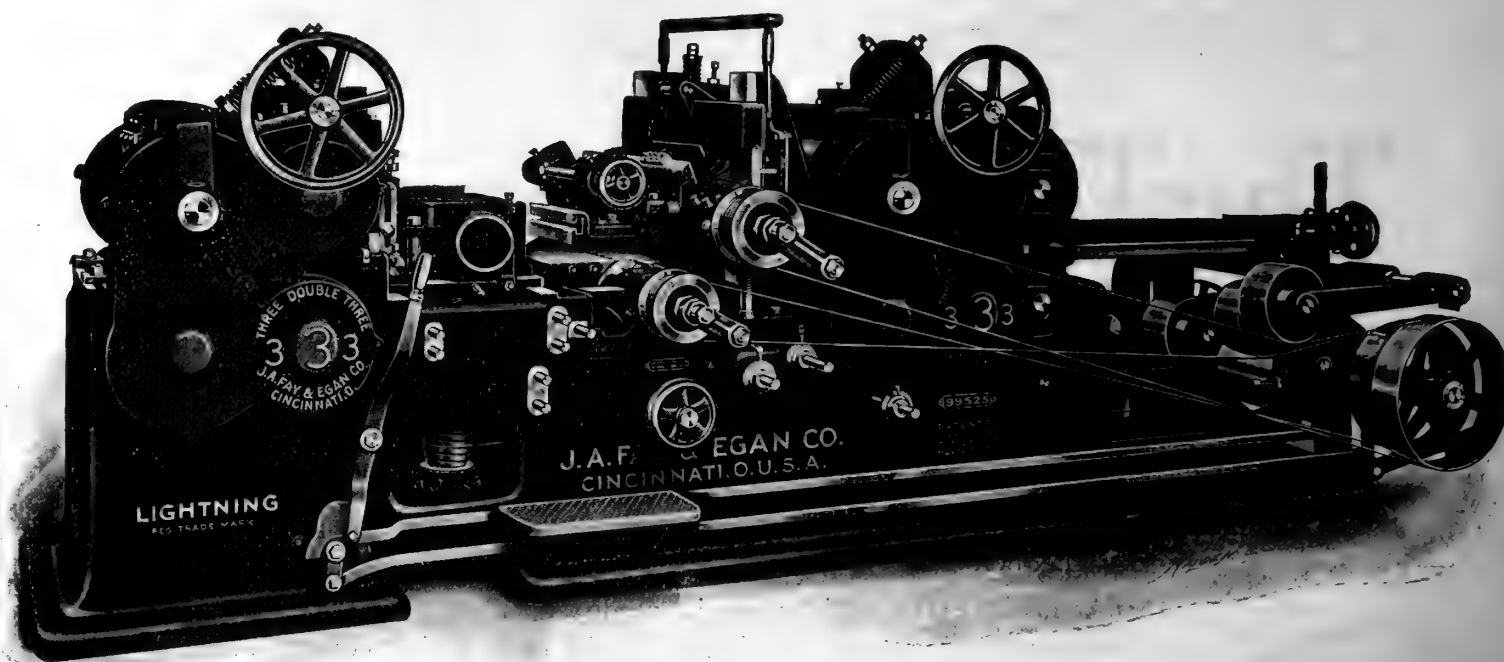
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View 1 illustrates a swage sawn in half to show its method of working. The tooth is swaged by a series of three rollers which cannot bind. The tooth is rolled out and not drawn.

A double thread is used on the locking lever. The first thread is rapid so that a slight movement of the lever allows the swage to travel on the saw without being lifted over each tooth. The second thread is slow so that the swage may be securely locked on the saw. The point at which the rapid thread ceases and the slow thread operates is governed by an automatic spring.

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Newburgh, Ontario



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The "333" itself forms the cost cutting installation of many up-to-date Planing Mills throughout the country—it will reduce manufacturing costs 40 to 50% and raise grade of lumber 10 to 30% as compared to the old style matchers—but in most cases, the "333" with either Horizontal Band Resaw or Profiler forms the Planing Mill men's ideal.

The cut in manufacturing cost is even greater with one of these combinations than the almost unbelievable economy of the "333" itself.

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Every lumberman is more or less acquainted with the Modern Fast Feed High Duty Matcher and Surfacers. However, we have had printed a thorough treatise on this type of machine,—in fact, it seems just like taking one apart in your own office. The combinations of the "333" and all the appliances for Fast Feed Machines are also shown and described in detail. Send us the coupon—nothing more—and we will send this Book.

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Send us a gallon of feed water which we will analyze and then mix a sample of potato scale to suit your conditions—this is a free trial, write us.

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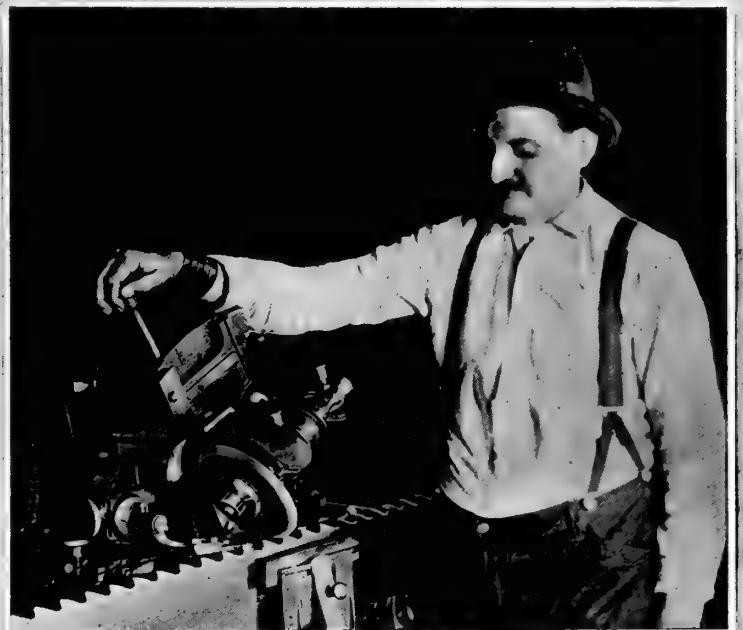
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say but what users say**

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs,
in calm weather, 30,000 in a head wind.

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What saw gumming wheel he prefers, he will say the wheel that cuts clean, quick, and positively cool—the wheel that cuts without rasping, for it is the still wheel that really does the work—a wheel that will hold its shape; that can be fed into the gullet as hard as you please, and will cut without case-hardening the saw;

*He will say the Aloxite
Saw Gumming Wheel*

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1 inch No. 1 cuts and better	\$55 00	57 00
1 1/2 inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1 1/2-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	46 00
5/4 and 6/4 No. 1 cuts	52 00	54 00
8/4 No. 1 cuts	55 00	56 00
4/4 No. 2 cuts	38 00	40 00
5/4 and 6/4 No. 2 cuts	42 00	44 00
8/4 No. 2 cuts	45 00	46 00
4/4 No. 3 cuts	28 00	30 00
5/4 and 6/4 No. 3 cuts	32 00	34 00
3/4 No. 3 cuts	33 00	34 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
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5/4 and 6/4 x 6 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out.	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out.	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out.	36 00	36 00
2 x 10 common	26 00	26 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1 1/2-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill culls	20 00	20 00
Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
2 x 10 and 12-in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11-in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16-ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 50	24 50
2 x 4 to 12-in., 12 and 14 ft.	23 50	23 50
2x4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 20 ft.	28 00	28 00
2 x 4 to 12-in., 22 ft.	27 00	27 00
2 x 4 to 12-in., 18 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	34 00	34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	34 50	34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.	35 00	35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 50	35 50
10x20, up to 32 ft.	36 00	36 00
6x18, 8x18, up to 32 ft.	36 50	36 50
6x20, 8x20, up to 32 ft.	37 50	37 50
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain		
No. 1 and 2 clear 1-in. Fir rough	44 50	45 00
No. 1 and 2 clear 1 1/4, 1 1/2 and 2-in. Fir rough	47 00	47 00
1 1/2-in. No. 1 4-ft. pine lath.	4 50	4 50
1 1/2-in. No. 2 4-ft. lath	4 20	4 20
1 1/2-in. 32-in. pine	1 60	1 60
1 1/2-in. No. 1 4-ft. hemlock lath	3 75	3 75
1 1/2-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XXX pine or cedar shingles	2 25	2 25
XXX B. C. cedar shingles	3 20	3 20
XXX B. C. cedar shingles	2 25	2 25
XXXX 6 butts to 2-in.	3 20	3 20
XXXXX 6 to 23-16-in.	3 40	3 40
XXXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1 1/2 and 2-in.	60 00	60 00
Ash, white, No. 1 common	45 00	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	39 00	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	39 00	39 00
Birch, No. 1, com. and bet., 4/4	33 00	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, No. 2 and 3, common	18 50	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nds, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4		
and 16/4	75 00	75 00
White oak, plain, 1st and 2nds, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1 1/2		
and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4		
and 16/4	75 00	75 00
White oak, 1/4 cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, 1/4 cut, 5/4 and 6/4, 1sts and 2nds	88 00	88 00
White oak, 1/4 cut No. 1 common	55 00	55 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1 1/2-in. & 1 1/2-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	45 00
Pine good strips:		
1-in.	40 00	42 00
1 1/2-in. and 1 1/2-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1 1/2-in. and 1 1/2-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1 1/2 and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1 1/2, 1 1/2 and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00	25 00
Pine, box boards:		
1" x 4" and up 6'-11'	17 00	18 00
1"x3" to 6", 12'-16"	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		
17 00	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1 1/4-in.	19 00	21 00
mill culls out, 1 1/2-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16"	18 00	20 00
1"x9"-10" and up, 12'-16"	22 00	24 00
1 1/2"x7" and up, 12'-16"	22 00	24 00
1 1/2"x10" and up, 12'-16"	22 00	24 00
1 1/2" & 2"x12" and up, 12'-16"	25 00	26 00
Spruce 1-in. clear (fine dressing and B)		
25 00	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out		
22 00	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1 1/2, 2-in.		
20 00	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1 1/2-in. x 4-ft.	4 00	4 35
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1 1/2-in.	3 00	3 25
Red pine mill run	3 25	3 60
Hemlock, mill run	2 75	3 00
32-in. lath	1 80	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70	75
Oak—Michigan and Ohio		
By the dram, according to average and quality	65	72
Elm		
By the dram, according to average and quality, 40 to 45 feet	80	90

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 22
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1 1/2 and 1 1/2 in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1 1/2 in., 8 in. and up wide 55 00
1 1/2 in., 8 in. and up wide 57 00
2 in., 8 in. and up wide 60 00
2 1/2 and 3 and 8 in. and up wide 75 00
4 in., 8 in. and up wide 85 00

No. 2 Cuts

1 in., 6 in. and up wide 31 00
1 1/2 in., 6 in. and up wide 42 00
1 1/2 in., 6 in. and up wide 44 00
2 in., 6 in. and up wide 47 00
2 1/2, 3 and 4 in., 6 in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6 in. and up wide 24 00
1 1/2 and 1 1/2 in., 6 in. and up wide 33 00
2 in., 6 in. and up wide 33 00
2 1/2, 3 and 4 in., 6 in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 13 in. and up 34 00
1 1/2, 1 1/2 and 2-in. 30 00

No. 1 Barn

1 inch 31 00 45 00
1 1/2, 1 1/2 and 2-in. 36 00 45 00
2 1/2 and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1 1/2, 1 1/2 and 2-in. 30 00 38 00
2 1/2 and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1 1/2, 1 1/2, 2-in. 20 00 25 00

Box

No. 1, 1, 1 1/2, 1 1/2, 2-in. 22 00 25 00
No. 2, 1 1/2, 1 1/2, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1 1/2, 1 1/2 and 2-in. 20 00
No. 2 17 00 18 00

Lath

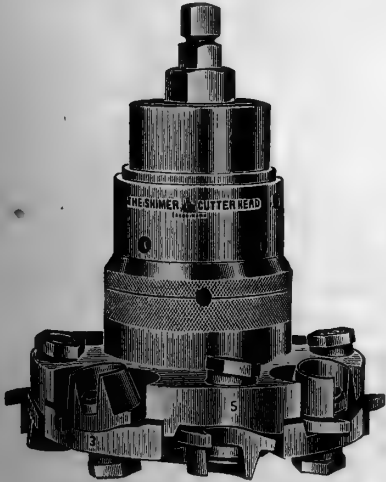
No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN

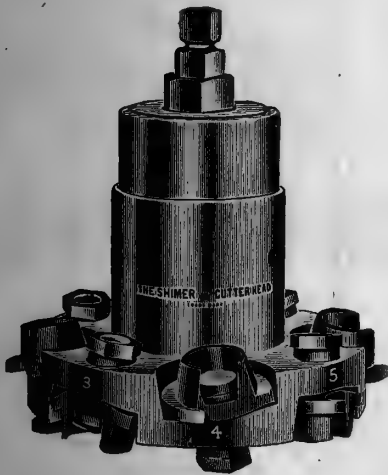
USE THE SHIMER CUTTER HEADS

For Flooring, Ceiling, Siding, Ship Lap, Jointing, Double Ceiling, Doors, Sash, Blinds, etc,

Made of steel Forgings, they represent the greatest possible strength in compact and workmanlike manner, embodying the vital principles of clearance to all leading Bit Points. The alternate and shearing effect of the cut reduces to a minimum the tearing-out tendency of cross-grained lumber. Cutters have exact shape in their exterior circles, and uniform product is maintained indefinitely without extra trouble or expense.



The Shimer Limited, with Expansion, Fig. 628. Groove Head with 8 Bits and self-centering and spindle clamping features. Price \$36.23 each, complete.



The Shimer Limited in solid section, Fig. 625. Groove Head with 8 Bits and the self-centering and spindle clamping features. Price \$33.50 each, complete.

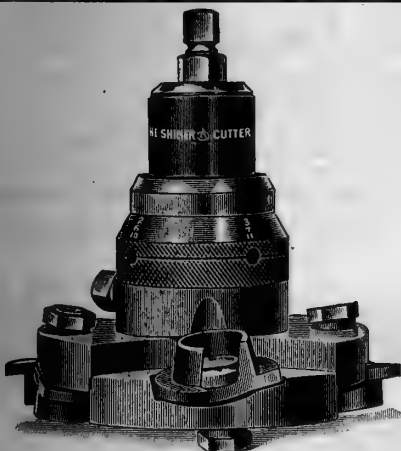
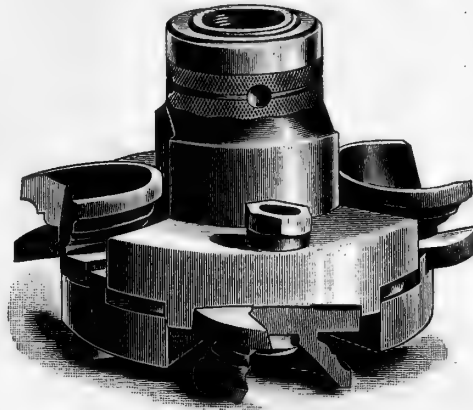


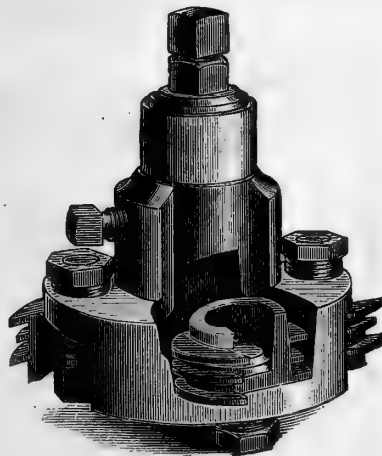
Fig. 203, Popular Expansion Groove Head with 4 bit seats, complete, net \$20.48. Made also with 6 and 8 Bits to each Head.

The Shimer Door and Sash Heads



Save the filing to shape at each sharpening of the cutters. They are made per order, carry in their outline the perfect counterpart of the work, thus by simply filing the Bits and setting them to the gauge the fitting of the manufactured parts is assured.

A solid Door Head with Bits to work 1 to 1 1/4 inch Doors costs only \$18.03, and an Expansion Head only \$20.63. A solid Sash Head to mould 1 to 1 1/4 inch Sash, complete with Bits, costs only \$16.91—an Expansion Head fitted out complete only \$19.51. \$62.87 will give you an excellent solid section outfit, including Door Cope Heads and Sash Cope Heads. If you want the very best with Expansion the cost will be only \$68.07.



Double the Capacity of Your Matcher or Moulder
By the use of the Shimer Double Ceiling and Double Flooring Heads.

Run your stock with double tongue and groove and then re-saw. 100 per cent gain in output for an investment of only \$40.94 and upwards.

The Bits on the Shimer Double Heads mark the saw cut line of division on the stock so that the sawyer can at once detect any variation of the saw and correct it as the board is passing through.

These Heads are not an experiment. We have made them for years and they are in daily use in the best mills of this and other countries. You will find them very complete and practical tools, carrying the Shimer guarantee to do as represented or no sale.

Heads for making Ship Lap

The Shimer Cutter Heads for Ship Lap are so proportioned in the Bits and their seats that a perfect draw cut is made. They work interchangeably with our matcher Heads and always produce good work.

Price, per set, complete, \$33.64 to \$38.48, according to thickness of cut.

Extra Bits for making Wainscoting on these Heads \$1.95 each.

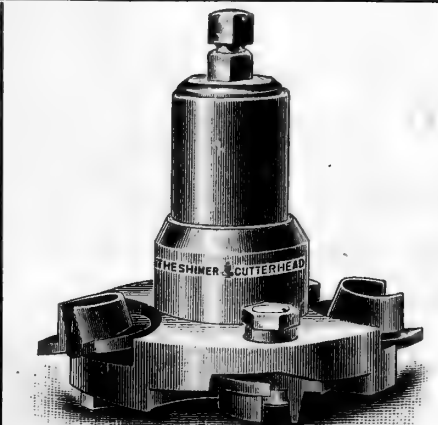
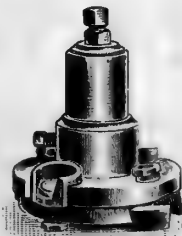
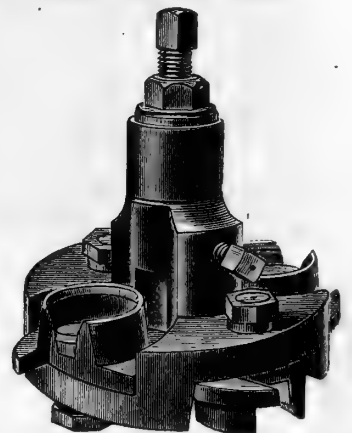
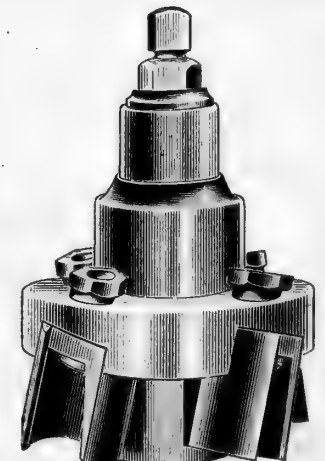


Fig. 23, a Popular Solid Groove Head with 4 bit seats, complete, \$17.87. Also made with 6 or 8 Bits to each Head.



Groove Head, Fig. 2. For plain matching or tongue and groove joint, complete with Bits, \$13.00.



Jointer Head, Fig. 55, with 4 Bits in line of work. Also made with 6 and 8 Bits to each Head. With 4 Bits \$16.64.

Our Bedée Knives, recommended by users as the best thin steel knives on the market, can be furnished in any length or thickness on short notice. Write us about your requirements.

Samuel J. Shimer & Sons, Inc.

Milton, Pa., U. S. A.

Galt, Ontario, Can.

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24
RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22

SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22

BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23

PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.		55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.		40 00	

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
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Barn Boards, No. 1, 1 x 12	48 00	50 00
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No. 1, 1 x 10	38 00	
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No. 1, 1 x 8	37 00	
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No. 2, 1 x 12	40 00	42 00
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No. 2, 1 x 10	35 00	36 00
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No. 2, 1 x 8	34 00	35 00
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No. 3, 1 x 12	32 00	33 00
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No. 3, 1 x 10	29 00	30 00
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No. 3, 1 x 8	29 00	
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Canadian spruce boards	25 00	
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Spruce, 10 in. dimension	28 00	
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Spruce, 12 in. dimension	29 00	
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Spruce, 9 in.	25 00	
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Spruce, 8 in. and under dimen.	24 00	
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10 and 12 in. random lengths,	26 00	
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10 ft. and up	21 00	22 00
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2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7		
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and 3 x 4 random lengths, 10		
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feet and up	21 00	21 50
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All other random lengths, 7-in.		
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and under, 10 ft. and up	21 00	21 50
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5-inch and up merchantable		
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boards, 8 ft. and up, p 1s	23 00	
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1 x 2 and 1 x 3 furring, p 1s		
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clipped and bundled	23 00	
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1 1/2-in. spruce laths	4 40
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1 1/2-in. spruce laths	3 80
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New Brunswick Cedar Shingles	
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Extras	3 55
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Clears	3 10
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Second clears	2 90
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Clear whites	2 80
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Extra 1s (Clear whites out)	1 50
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Extra 1s (Clear whites in)	1 00
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Red Cedar Extras, 16-in. 5 butts	
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to 2-in.	3 55
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Red Cedar Eurekas, 18-inch	
----------------------------	--

5 butts to 2-in.	4 25
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Red Cedar Perfection, 5 butts	
-------------------------------	--

to 2 1/4	4 30
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Washington 16-in. 5 butts to 2-	
---------------------------------	--

in, extra red clear	3 50
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The Pearl City Veneer Company, James-	
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town, N.Y., report prices of veneers as fol-	
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lows. 1/30-in. maple, \$3.75 per M. feet; 1/24-	
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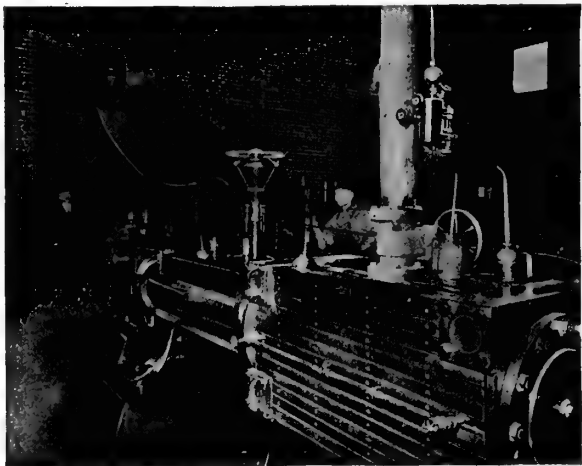
in maple, \$4.00 per M. feet; 1/20-in. maple,	
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\$4.25 per M. feet; 3/16-in. 3-ply maple, sand-	
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ed one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple,	
---	--

sanded one side 4 c. per ft. All F.O.B. James-	
--	--

town, New York.	
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This belt pulls 100 h. p. Note the 17-inch slack and then note the tightener used before applying Cling-Surface.

We have already called attention to many installations where Cling-Surface has made belts do more and better work.

Here is another: When photographed this engine in the plant of J. S. Hagerty Brick Co., Detroit, Mich., was delivering 100 h.p. from a 6-ft. to a 3-ft. pulley through a 20-in. three-ply leather belt, engine speed 75 r.p.m. Center to center of pulleys 20 ft.

Since April, 1903, this belt has had good consistent Cling-Surface treatment and has given no trouble. As shown, it runs with 17 in. slack, and without slip.

Mr. Henry Malesky, the plant superintendent, says about this belt: "You will notice that the heavy tightener necessary before Cling-Surface was used is now hanging in the air, clear of the belt. It is no longer needed."

This belt like all Cling-Surface-treated belts, is giving excellent service. It is just one of hundreds of instances where Cling-Surface is saving many dollars each year simply because it relieves the belts of unnecessary initial tension and entirely eliminates slip.

Tell us your conditions and we will tell you what improvement is possible with Cling-Surface. Write for literature and ask for quotations which are f.o.b. Toronto.



Cling Surface Co

1021 Niagara St Buffalo N Y

New York Boston Chicago Denver

Atlanta Memphis Toronto Etc 66

WHY?

Pay for Bags, Sacking, Freight, Handling, Cadging on light dirty oats, when the above items of cost are the same on

Heavy, Clean, "National" Oats

purchased direct from producers and shipped from our elevators in the heart of the best oat sections of the Western Provinces.

Write or wire for quotations

National Elevator Company, Limited

WINNIPEG, MANITOBA

Port Arthur, Ont.

Calgary, Alta.

"AJAX" The World's Strongest Chain



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs. (See how this Chain stretched before breaking.)

Do your log loading with the "Ajax" loading chain, every link of which is guaranteed. The illustration tells a convincing story.

Manufactured only by

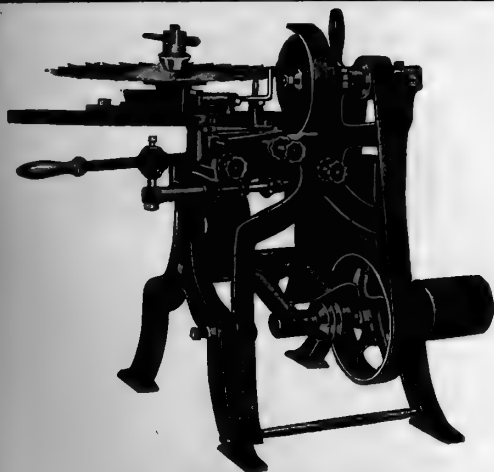
Standard Chain Company
Pittsburgh, Pa.

The World's Largest Chain Producers.

Montreal: Alexander Gibb, St. Nicholas Bldg.

Winnipeg: Bissett & Loucks.

Vancouver: John Burns, 329 Railway St.



Save Money

by using one of our Automatic Saw Sharpeners. Saws sharpened on them will do better work and more of it.

This cut illustrates our our No. 1 Circular Saw Sharpener, fitted to handle, a saw up to 40 inches diameter.

We make a complete line of Automatic Knife Grinding and Saw Sharpening Machinery.

Send for Catalog

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.

Dixon's Graphite Water-proof Grease



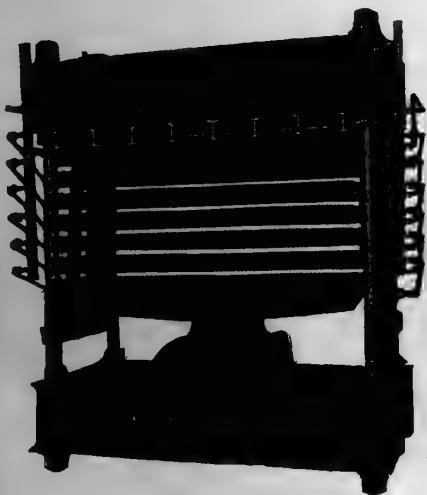
A single trial of this splendid heavy-bodied mixture of mineral grease and flake graphite will convince you of its superiorities, both as a lubricant and as a rust preventive, over any other grease on the market. No saw mill plant should be without it, for the protection of slides, open bearings, chains and wire ropes.

Send for Booklet No. 238 on "Waterproof Grease."

Made in JERSEY CITY, N. J. by the

Joseph Dixon Crucible Company

Established 1827



Veneer Press and Dryer

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

WRITE FOR PRICES AND QUOTATIONS

William R. Perrin and Company, Ltd.
TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

The Laidlaw Bale-Tie Co., Limited

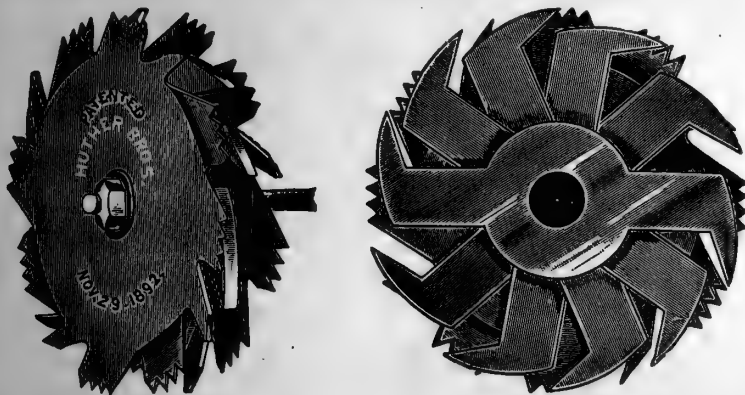
Winnipeg
Harry F. Moulden & Son

HAMILTON,
ONTARIO

Vancouver
George W. Laidlaw

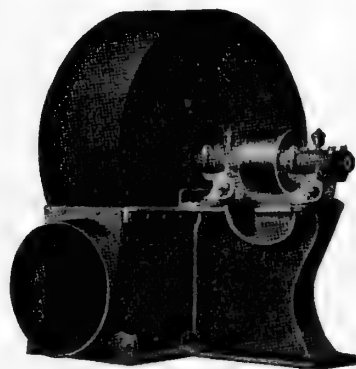
HUTHER BROS. PATENT GROOVER OR DADO HEAD

For cutting any width groove from one quarter inch to 3 inches or over



Can be used on any Circular Saw Material. Will cut a perfect groove with or across the grain. This is the only Dado Head on the market that gives entire satisfaction on all classes of work. No screw adjustment. For different width grooves, simply remove or add inside cutters. Sold by builders and dealers of wood working machinery in all parts of the United States. Will send on approval, in competition with any other make on the market; if not the best return at our expense.
HUTHER BROS., SAW MFG. CO., Inc., 1103 University Ave., ROCHESTER, N. Y., manufacturer
Circular Saws, Morgan Pattern Lock-Corner Box Cutters, Concave Saws, etc.

WHY you should install the Mahony Blower System in your Planing Mill



Fifty per cent. higher efficiency than any other on the market to-day, uses 1/3 less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

A. Mahony, 512 Wellington West, Toronto



Griplock Riveted Chain Belt



Section of Griplock Riveted

No More Breakdowns—No More Delays

This is the slogan that users of **Griplock** Chain Belt have adopted. No hooks to be opened up, no breaking of chain belt in **Griplock**. **Griplock** is so constructed that it will withstand the severest kind of service. It is built by the Chain Belt Company, Milwaukee, Wis., a concern that fully understands the requirements of the Lumber and Saw Mill Trade.

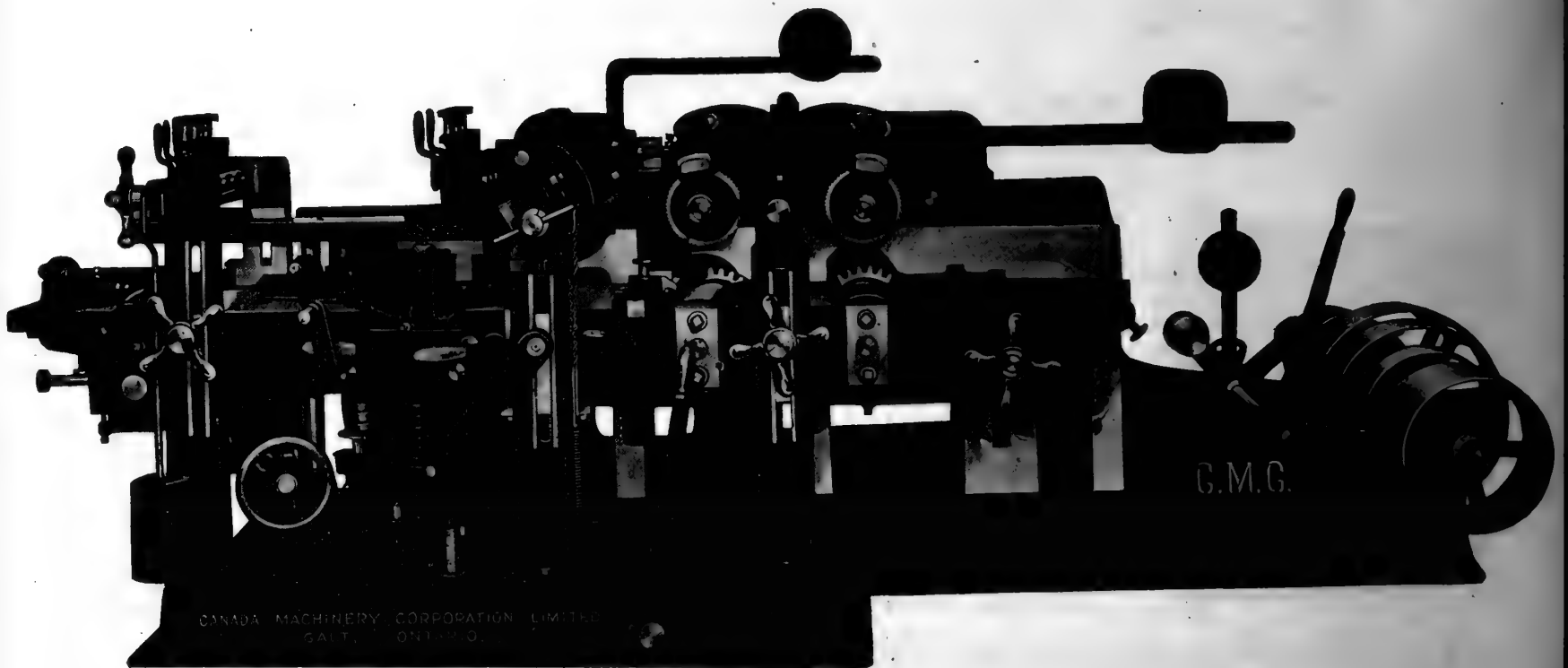
We would be very glad to mail you sample links for your inspection.

Sold by **The A. M. ELLICOTT CO., Montreal, Que.**
Elevating, Conveying and Transmission of all kinds a specialty

12" MOULDER



12" MOULDER



303—Heavy Duty Foursided Moulder.

A heavy substantial moulder suitable for all classes of work.
It is the most convenient moulder to adjust and operate on
the market to-day.

Heavy feed works. Outside top head support.

Increased weight. Long heavy table.

A new Bulletin No. 303 fully describing this moulder has
just been issued and will be sent to you on request.

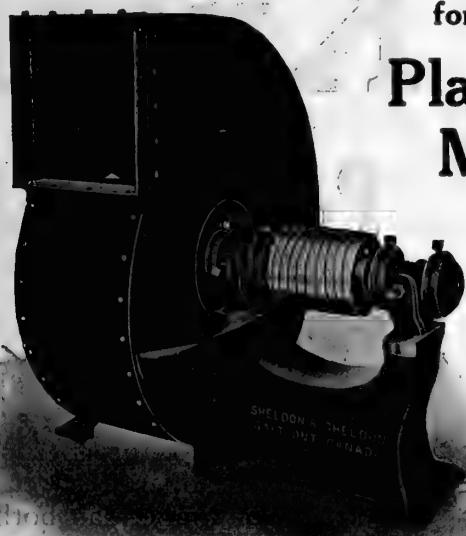
Canada Machinery Corporation, Limited

Galt, Ontario

Largest Builders of Wood-Working Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

Messrs. Ross & Greig, 412 St. James St. Montreal, Que. Messrs. Walker's Limited, 259 Stanley St. Winnipeg, Man.
Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

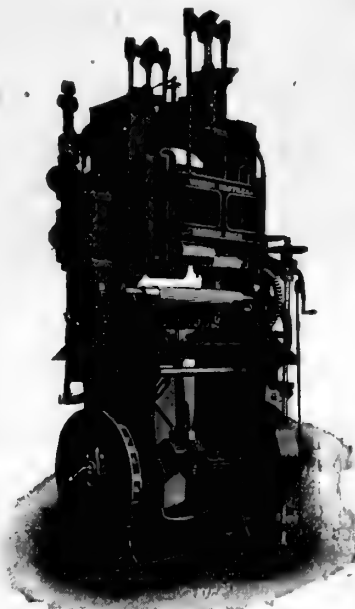
JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbings (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."



Wickes Brothers

410 White Building

SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

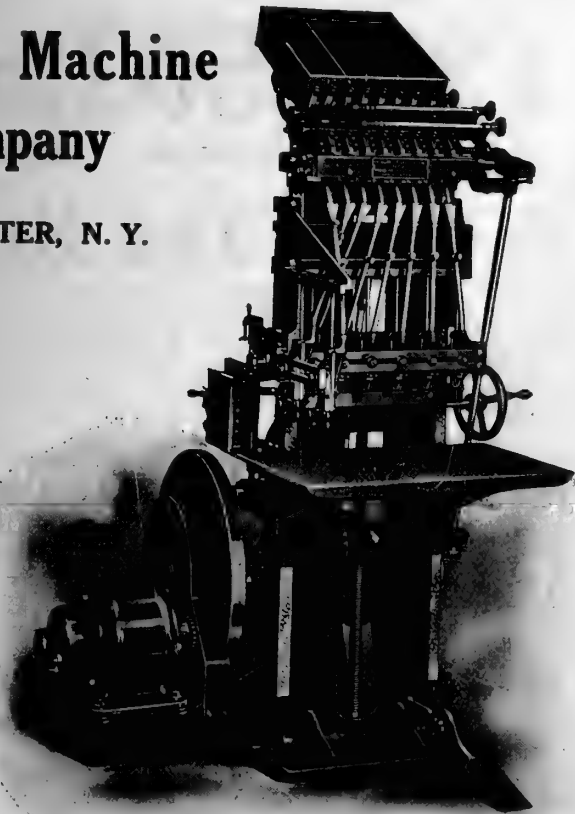
Manufacturers
of—

Nailing
Machines,

Lock Corner
Box
Machinery,

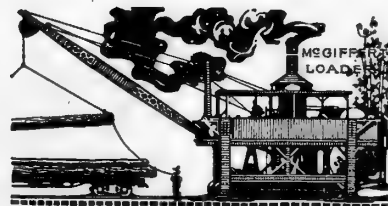
Box Board
Matchers,

Box Board
Printing
Machines.

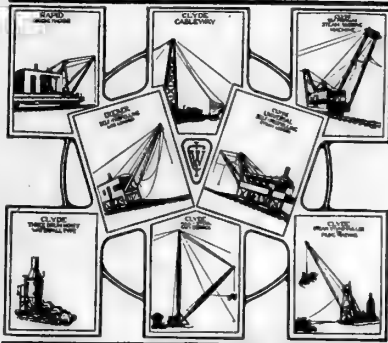


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.



Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

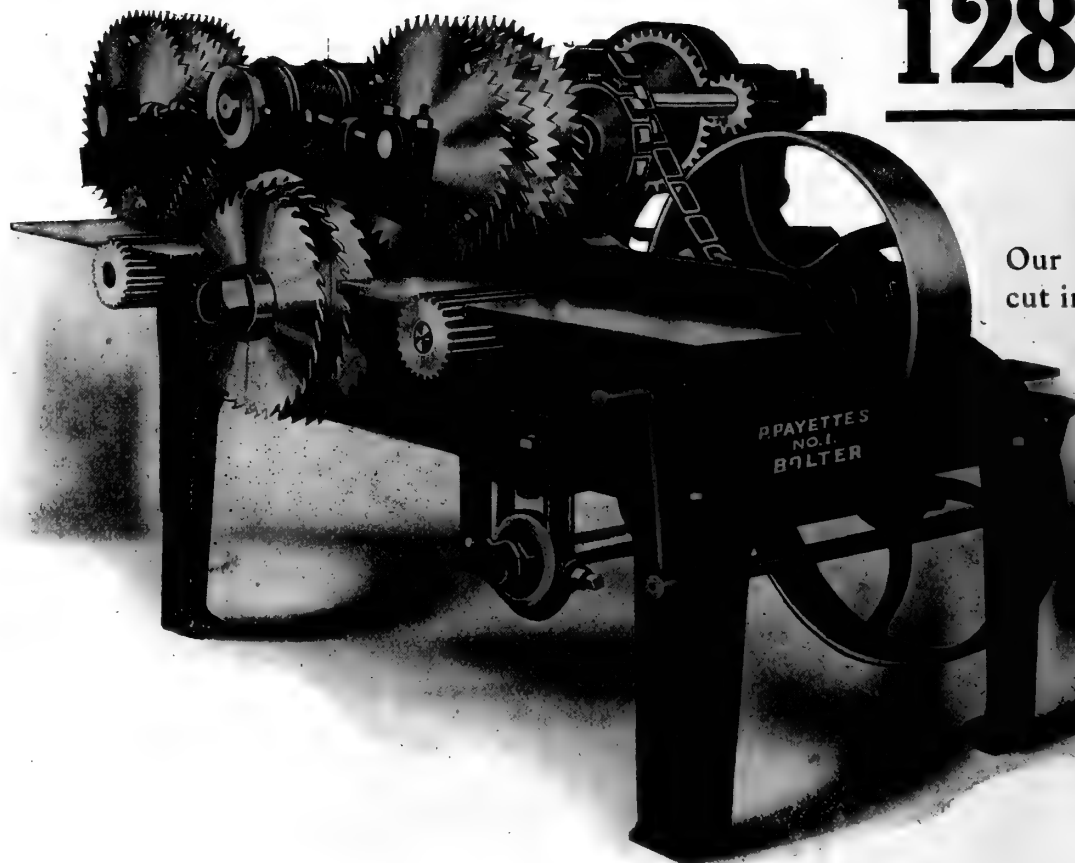
Size "S" Single Mill with 16-foot Carriage

Size Husk	3 feet by 6 feet 3 inches	Width of Carriages	33 inches
Diameter and Length Mandrel	2 3/16 by 55 inches	Trucks	7-inch wheels and 1 1/4-inch axles
Size Drive Pulley	20 by 10 inches	Length Track	32, 40, 48 or 56 feet
Feed per Revolution of Saw	0 to 3 1/4 inches	Style and Opening of Blocks	CI-36 inches
Feed Belt	4-inch Gandy	Style Mill Dogs	Pony Excelsior
Largest Diameter Saw	56 inches	Style Set Works	No. 1 Single Ratchet
Length of Carriages	12, 16, 20 or 24 feet		

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C.. E. Long Mfg. Co., Orillia, Ont.



128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1 1/2 in. by 3/8 in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.

A Few of the "400" who use Payette's Lath-Machinery:

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubesa, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.

P. Payette & Company,

Engineers and Machinists

PENETANGUISHENE, ONT.

Berlin Matcher Success has been Earned

Berlin Matchers have proven absolutely successful during the past year.

By "successful" we mean that our every claim as to their efficiency, producing ability, quality of lumber manufactured and low up keep cost in operation, has been substantiated with every installation of a Berlin Matcher

And this success did not just happen. It was earned by the combined efforts of the most able Berlin Engineers.

Their supreme efforts have been centered upon the one object sought; the pre-eminence of Berlin Matchers as producers of finished lumber.

That necessitates the possession of features or qualities of acknowledged superiority.

Superior design of working features, of supports for those features and of auxiliaries for their immediate assistance in producing perfectly manufactured lumber, possessed by Berlin Matchers has assured their pre-eminence.

And this has all been earned by diligent, consistent and persistent effort to supply our patrons with the best Matchers that engineering ability, plus the experience of practical mill men, carefully applied, could produce.

It is the result of attempts, year after year, to perfect a machine that would manufacture the finest lumber at a cost that insures a profit.

Our efforts have been crowned with success. And, it is to be your success as well as our own. For Berlin Matchers operating in your plant will assure a profit on the finished lumber they produce.

On paper we can give you only our claims,—reasons why you should, at least, investigate the ability of a Berlin Matcher to finish your lumber at a lower cost than you are now manufacturing it.

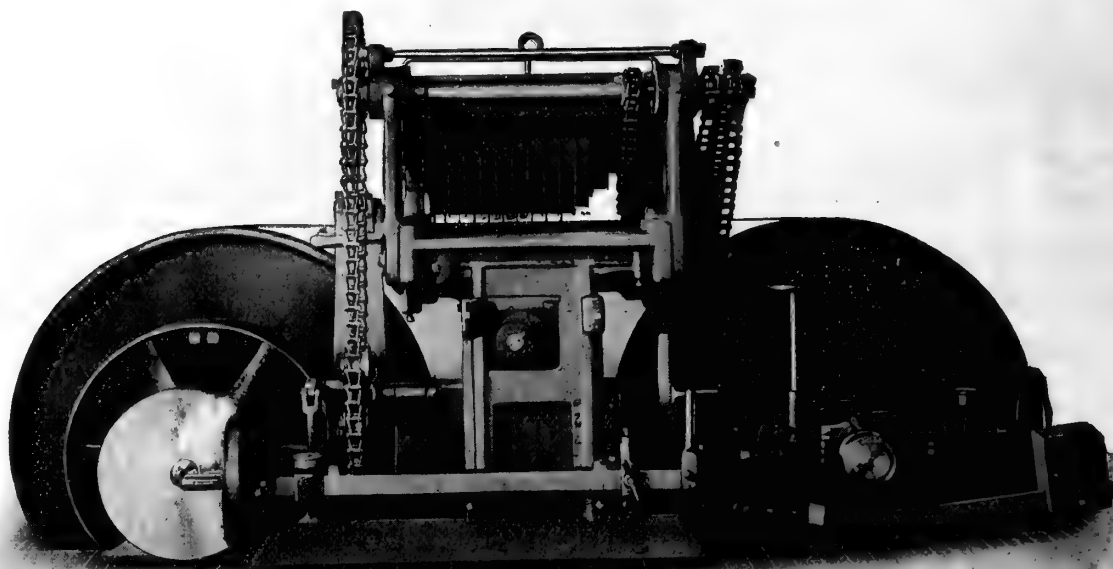
Given the opportunity we will be glad, actually to demonstrate that ability, in a Berlin Matcher.

More is expected of a Berlin Matcher than any other because Berlin Matchers have always been successful. And Berlin Matchers have always given more than was expected because they are Berlin Matchers.

The features that made this matcher a success are described in a circular that you may have on request.



THE BERLIN MACHINE WORKS - - **Hamilton, Ont.**
United States Plant - - - **Beloit, Wis.**



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

KEEP THE WORK GOING



Nothing is more important in logging than the prompt and certain movement of cars.

Delays affect the whole work. To avoid delays, locomotives must be reliable and always ready for service.

Our standard logging locomotives are built to insure reliability and constant service. Only tested materials are used in their construction. All wearing parts are made to templates and gauges. Interchangeability of like parts is guaranteed, and long delays waiting for duplicate parts avoided.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVESFOR WOOD AND
IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**Logging Locomotives**

The knowledge and experience of fifty years in locomotive designing and construction is what you get in our Logging locomotives. They are specially constructed for logging operations and will stand up to the severe service in which they are expected to run.

They are as carefully designed and built as our 200 ton locomotives. Repair parts may always be obtained on the shortest notice.

May we send you specifications?

Canadian Locomotive Company, Limited, Kingston, Ont.

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

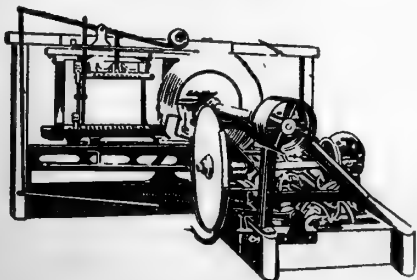
Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

16,000 to 45,000 good shingles per day of ten hours. YES, that's what ONE MAN WILL joint and sort when operating our

GENUINE "Dunbar" Shingle Machine



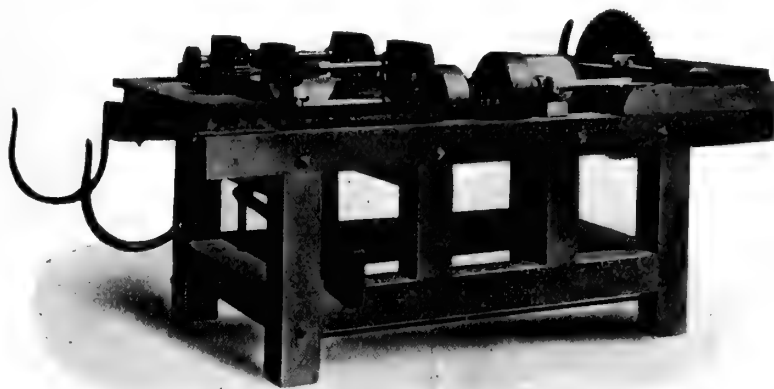
We are Pioneers in this line of work in the Dominion, and the "Genuine Dunbar" is manufactured only by us.

Write us for particulars of this, and also when in need of lumbering machinery and supplies.

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson Mfg. Co.

Fredericton, N. B.



Lath Mills

There is much waste in every mill that can easily be manufactured into lath by our improved lath mill.

This machine is inexpensive in construction yet capable of turning out the very best work.

Get our prices and literature.

Maritime Foundry & Machine Wks.

Limited

Chatham,

New Brunswick



THE PETER GERLACH CO.

MANUFACTURERS
AND BUILDERS OF

SAWS

CIRCULAR AND CYLINDER

MACHINERY

STAVE HEADING AND BARREL

TOOLS

SAW AND LOGGING

For the Manufacture of the following

STAVES	HEADING
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HOOPS	HANDLES
PAIS	TUBS
CHURNS	FREEZERS
CANDY PAIS	FISH KITS
BOX BOARDS	BOTTOMS
CHAIR STOCK	SHINGLES
CLOTHES PINS	LUMBER

COMPLETE PLANTS
FOR THE MANUFACTURE OF

BARRELS, KEGS, STAVES AND HEADING

OUR SPECIALTY.

FOR PRICES AND FURTHER PARTICULARS,
ADDRESS

THE PETER GERLACH CO. CLEVELAND, O. U.S.A.



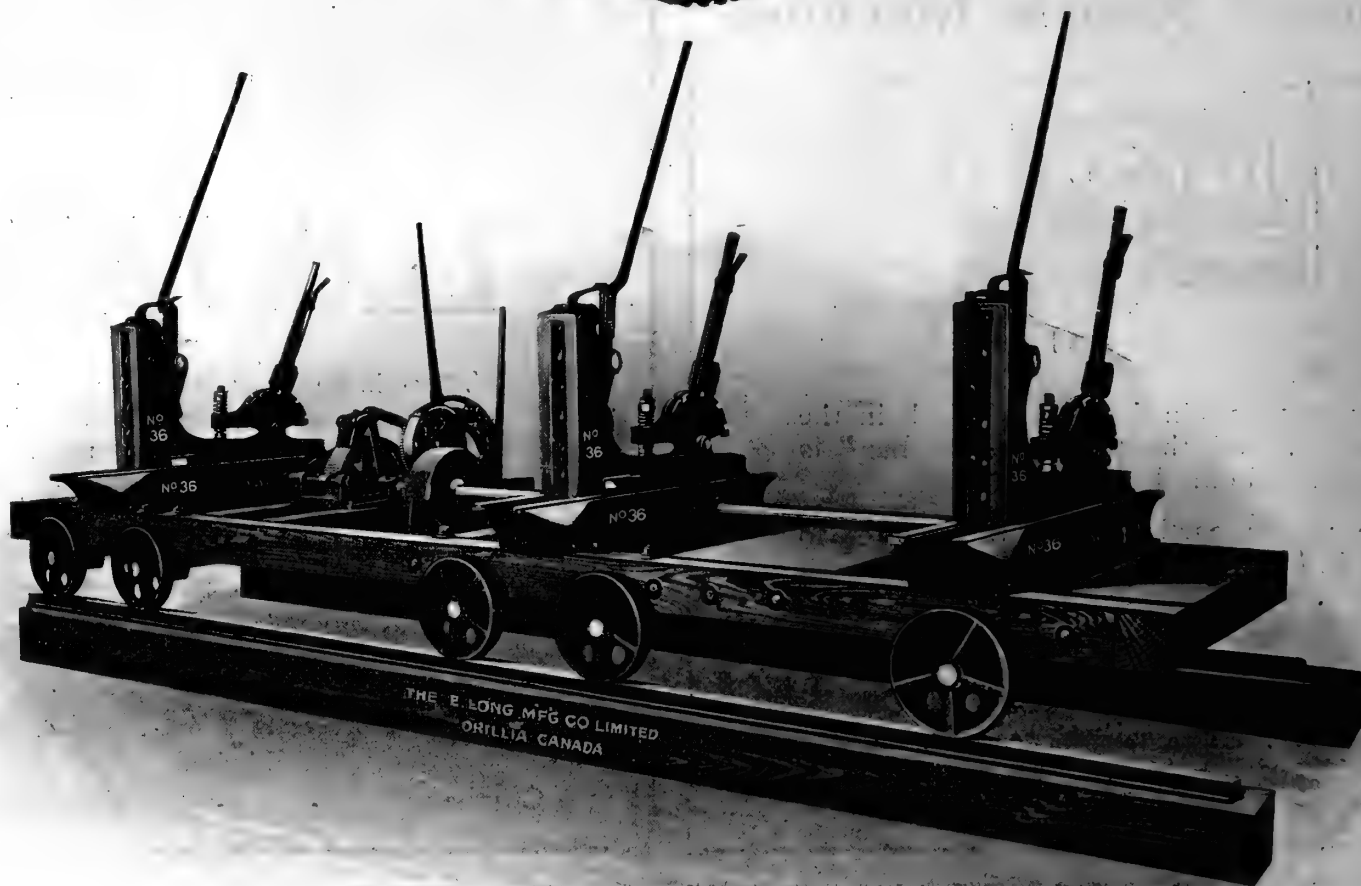
"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the "Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

Send for Bulletin No. 4

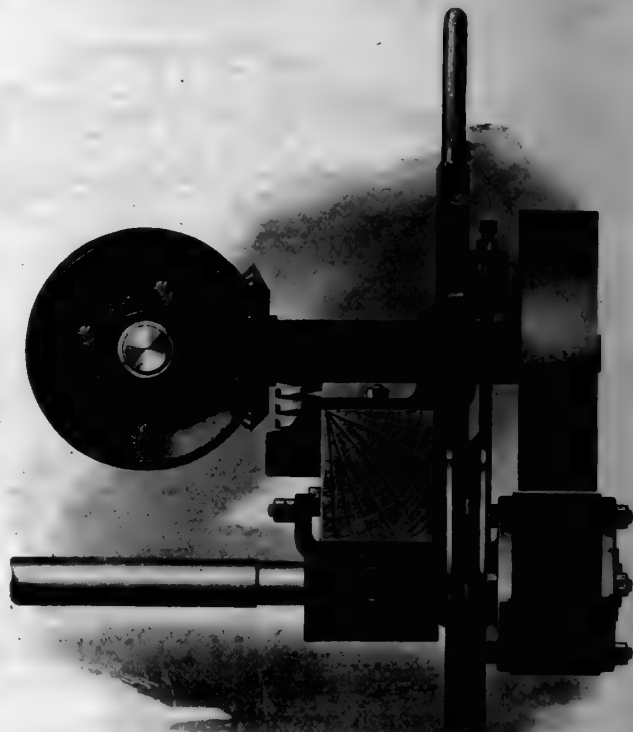
THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.

The Mark*of Quality*

This style steel carriage built with 36 in., 40 in., 44 in., 48 in., 54 in. and 60 in., opening from sawline.



Catalogue with full particulars of our carriages mailed on application, also, Log Jack Machinery, Log Deck Equipment, Lath, Picket and Slat Machinery or any other sawmill machinery you may be interested in. A post card with your request will receive prompt attention.



Long's Incorporated Boss Dogs. Absolutely Guaranteed.

Class "B" Friction Recede.

The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver
Gorman, Clancey & Grindley, Calgary and Edmonton

Represented by:

Stuart Machinery Co., Ltd., Winnipeg
Williams & Wilson Ltd., Montreal



Waterous Built Log Deck of the Pembroke Lumber Company, Pembroke, Ontario.

LOG DECK EQUIPMENT

That Has a "Punch" Behind It



WATEROUS Log Deck Equipment is designed not only to handle heavy work but to handle it fast.

The punch of plenty of power that is behind the action of a Waterous Log Deck is combined with a quickness and snap that shows that the power is applied where it will do the most good.

There is no time lost getting the log from the chains to the carriage. The direct response to every motion of the sawyer's levers through the deck makes the seconds count. It means a speeding up in every part of the mill.

You can buy Waterous Log Deck Machinery for mills of every size. These machines are not in the experimental stage but have stood the test of actual service in Canada's largest and fastest installations.

Our bulletin No. 106 will give you all the details. We will be glad to furnish prices.

The Waterous Engine Works Co.

Brantford, Canada Limited

H. B. Gilmour, Vancouver, B.C.

Branch—Winnipeg, Man.

Our Log Deck Includes :—

- Log Loaders
- Kickers
- Flippers
- Stationary Niggers
- Oscillating Niggers
- Cant Trips
- Board Lifters
- Log Turners



"FROST KING" METAL

Our thirty five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

\$5,000,000.00
worth of mixed metal
sold annually.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:—

New York, N. Y.

London, Eng.

St. Louis, Mo.

BATTS LIMITED

WEST TORONTO

MANUFACTURERS OF

Staved Columns
Veneered Doors
Newel Posts
Sashes - Flooring
Trim
Pine Doors and
Frames
Turned Newel Posts and
Balusters
Cypress Greenhouse
Material

BATTS LIMITED

MANUFACTURERS

WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
KNOWN
OUR
"EXTRA"



MONTREAL
WINNIPEG

TORONTO
VANCOUVER

The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL

Slow Speed — Low Power Exhaust Systems

For removing Shavings, Sawdust, Emery Dust, Lint Smoke and Odors

Is your Blower System satisfactory? — If not, we can make it so

What We Have Done For Others, We Can Do For You



Our System recently installed in Largest Box Shook Factory in Ontario.

TORONTO BLOWER CO., Toronto, Ont.

Canada Lumberman

Time is Money

The rapid cutting File is the economical File

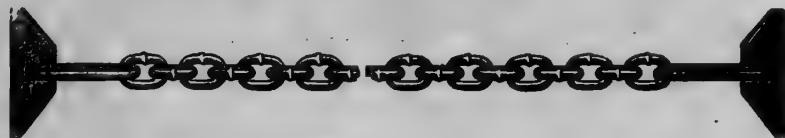
Files Branded

American - Arcade - Eagle - Great Western
Globe - Kearney & Foot - McClellan - J. B. Smith

are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



Electric-Welded Boom Chain

25% {More Weld = 25% {More Strength = 25% {More Wear

Sheared Toggle and Ring * T-Bar Hook and Link * Two Sheared Toggles * Forged Toggle and Ring

Made in Canada

Write to

Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

NO FRAYING AT THE EDGES

Dick's Balata Belting possesses perfect uniformity throughout, whereby true and steady running is ensured, fraying at the edges rendered impossible, and perfect success in fork driving guaranteed. The combination of strength and uniformity in Dick's Belts is due to the process of solutionizing to which the textile portion of the Belting is subjected, and which thoroughly solidifies and unites the whole material. You can get all the facts in our Catalog No. 17.

DICK'S Balata Belting Leather Belting Wood Split Pulleys Shafting Hangers Iron Pulleys
Steel Pulleys Saw Mill Supplies Clutches Babbitt Wood-Working Machinery Steam Goods

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Fairbanks Scales
Montreal Toronto

Fairbanks-Morse Gas Engines
St. John, N. B. Winnipeg

Safes and Vaults
Calgary Vancouver



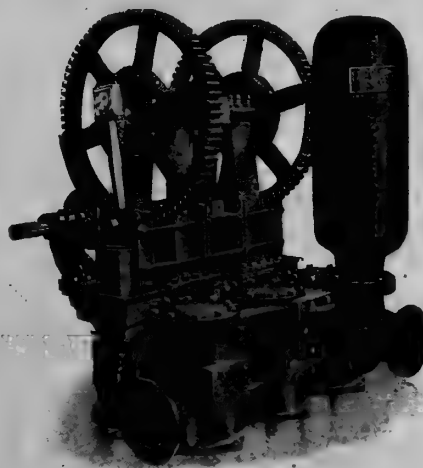
F. REDDAWAY & CO., MONTREAL, Sole Makers of



STITCHED CANVAS BELTING
THE "CAMELATA" BELTING
REGISTERED
LINEN FIRE HOSE

Write for Booklet

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER



OUR first aim is to please
our customers. Why
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Pumping Machinery?

**The Smart-Turner
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Limited

Hamilton Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless
Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwt. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

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MONTREAL

Midland Planing Mill Products

THE LEADING STOCK LINES

Do You Know

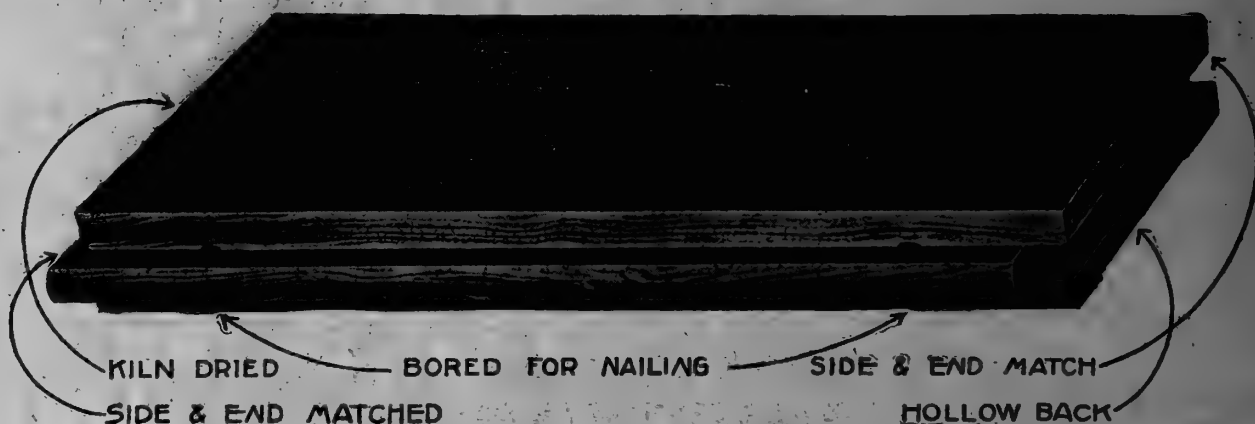
the place to order your Rush and Miscellaneous Orders for Hardwood Flooring is the Shook Mills?

We have an extra set of flooring machinery ready all the time to run special orders. If the kind you want is out of stock, we are all ready to run it. We always ship promptly.

Here is an Item

When we ship 9/16 inch Beech Flooring, we either get a re-order or we get a complimentary letter from the customer.

The Reason Why? Try a Sample Order



Kiln-Dried, Tongued and Grooved, End Matched, Hollow Backed, Bored for Nails,
Bundled to Assorted Lengths, Stamped and Tied with Wire

Maple, Beech, Plain Oak, Quarter Cut Oak, Birch

Standard Grading Rules: Select—Clear—No. 1.—Factory.

Thicknesses: Thirteen-sixteenths ($13/16$), Nine-sixteenths ($9/16$), Three-eighths ($3/8$).

Midland Brand Hardwood Flooring—The kind that is advertised.

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company

CACHE BAY Limited - - - ONTARIO

Manufacturers of

**Lumber, Lath and
Dimension Timber**

Planing Mill

Dry Kiln

See Us First

Now that spring has arrived, do not forget when buying, that we have
a full assortment of

White Pine, Norway & Spruce

JAMES G. CANE & CO.

411 McKinnon Building, TORONTO, Ont.

Yellow Pine Timber

And Lumber Rough or Dressed
Car Material and Long Timbers
a Specialty

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Large and Long Timbers
for heavy construction work

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Manufacturers of **YELLOW PINE LUMBER**

Mills:—

Selma, La.
Jena, La.
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Long Leaf Timbers,
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Send your inquiries and orders to:—

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**Spruce
White Pine
Banksian Pine
Birch**

Get our stock list and prices.

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PULP WOOD

Wanted to Buy 10,000 Cords

Must clear out No. 1 Hemlock, 1913 cut

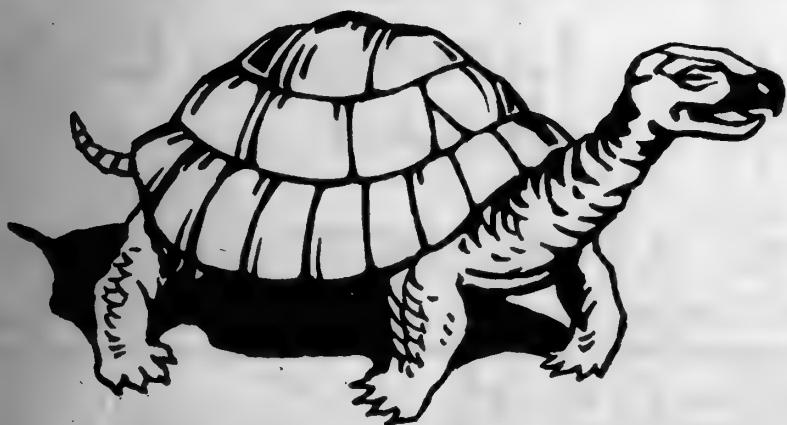
25,000 feet	2 x 4 — 16
45,000 "	2 x 6 — 14
26,000 "	2 x 6 — 16
17,000 "	2 x 10 — 14
90,000 "	2 x 10 — 16
10,000 "	2 x 10 — 18

8c. rate to Toronto.

The Long Lumber Co.

Hamilton, Ont.

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HOCKEN'S

HEMLOCK

PINE and HARDWOOD

There are many of us in the race but when you sell HOCKEN stock you have something that is hard to beat.

Our summer mills are now in operation. Send us your List.

Hocken Lumber Company, Limited

Otter Lake Station, Ontario



RED PINE DRY

3 x 11	2½ x 9	2 x 4	5/4 x 6
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3 x 9	2 x 12	6/4 x 6	5/4 x 4
3 x 5	2 x 10	6/4 x 5	1 x 6
3 x 4	2 x 8	6/4 x 4	1 x 5
3' Shorts	2 x 6	5/4 x 9	1 x 4

4/4 to 8/4 Clear and Clear Face.

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"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow Pine, in the Rough

Cedar Telegraph and Electric Railway Poles 20 to 80 ft.

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Timber for R. R. Construction and Commercial Purposes, a Specialty.

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Manufacturers of High Grade

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Fraser Bryson Lumber Co., Ltd.

Wholesale Lumber Dealers

Selling agents for Fraser & Co., Manufacturers

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Mills and Head Office
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Manufacturers of

WHITE PINE

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New York City: Guy E. Robinson, 1123 Broadway

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Spruce and Hemlock

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*Cedar Shingles**Lath*

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Look where you will,

"Bromley's" is the best stock in sight

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PINE

Wm. H. Bromley

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Wholesale
Lumber
Lath
Shingles

Quincy Adams Lumber Co., Limited

MANUFACTURERS AND WHOLESALEERS OF

White Pine, Birch, Spruce and Hemlock

Special price for quick shipments:

6/4-8/4-10/4 No. 1 Com. & Btr. Birch
1 in. & 2 in. Merchantable Spruce
2 in. & 3 in. Tamarac
1 in. Crating Lumber
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Toronto, Canada

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1913 Sawing

SPRUCE

Dry Factory White Pine—All thicknesses.

Nice Line 1 x 4 and up—6/11 Moulding White Pine.

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PINE, SPRUCE, HEMLOCK, HARDWOODS, LATH

Deal with me and you will be satisfied every time.

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Hemlock, Pine and Spruce Bills

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We have a good stock of White Pine, Red Pine, Jack Pine, Spruce and Hemlock.

Planing mill in connection with sawmill at Fesserton.

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Manufacturers of

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Our Mills Produce and We Market as Much GENUINE LOUISIANA RED CYPRESS As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

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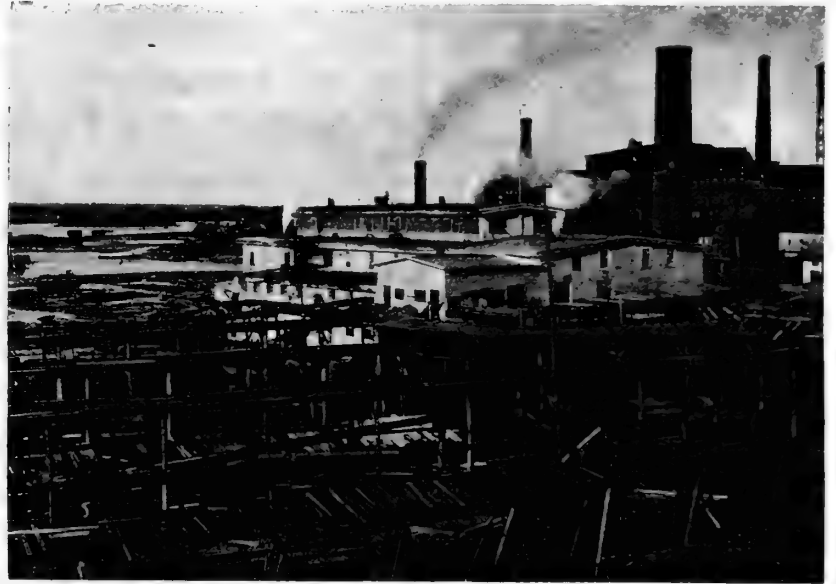
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**Shingles, Lath, Piano
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Chatham, New Brunswick, Canada



View of yard and mill—J. B. Snowball Co., Ltd., Chatham, N.B.

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**Spruce, Pine, Hemlock, Hardwood, Lumber,
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Mills—Chatham, Tracadie, Millerton.

We solicit your enquiries.

We invite correspondence re
“Dalhousie” Brand
N. B. Cedar Shingles *of all grades*
Special Prices for shipment to
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Dalhousie Lumber Co., Limited
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Agents for Ontario **R. Laidlaw Lumber Co., Limited**
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a classified advertisement in the **Canada Lumberman and Woodworker** will find one for you.

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no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.
The rates are most reasonable, write us.

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13 Foot and 16 Foot

**Lath and
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Saw Mill and Novelty Works. All
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Dimension Stock in Beech, Maple and
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*Send me your requirements, I can furnish
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Interior Trim Mill Work.
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Good
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Prompt
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We want to move the following
stock quick, and if you are inter-
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that should get the order. We ship
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1 " 6/4 No. 1 " "

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1 M ft. 12/4 No. 1 " "

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7 M ft. 6/4 No. 2 " BEECH

1 1/2 M ft. 5/4 No. 2 " "

3 M ft. 10/4 No. 1 " "

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Ask About Car 10/4 to 16/4 BIRCH

FULL LINE OF JACK PINE

Above stock dry and well manufactured

**C. G. Anderson Lumber
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Manufacturers and Strictly Wholesale
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WE Buy, Sell and deal in all kinds
of Lumber and Timber in Can-
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White Pine, White and Basewood, Ash,
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**The Canada Wood
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Manufacturers:

Lumber, Hardwood Flooring,
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Write, Telegraph or Telephone
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Hardwood Lumber

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SPECIALTY: Dressing of wood
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SPECIALTIES

Sawed Hemlock
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Planing of all kinds done by carload. Railroad Switch in connection with mill. All classes of building material, lime and cement for sale.

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10,000 Ft.	4/4	1st and 2nd Basswood
100,000 "	5/4	" " "
40,000 "	6/4	" " "
2,500 "	8/4	" " "
2,500 "	16/4	" " "
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11,000 "	6/4	1st and 2nd Brown Ash
2,000 "	16/4	" " " "
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1 Car	4/4	No. 2 C. & B. Brown Ash
48,000 "	4/4	No. 1 " Soft Elm
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F.O.B. 8c rate to Toronto.
Good Average Width and Dry.

—ALSO—

10 Cars 1 3/8—4 Ft. M. R. Pine Lath
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Thoroughly dry. Must be moved promptly.

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Write us for particulars
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For Sale by Owners B. C. Timber Lands

Located on { G. T. P.
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Saw Mill Help

Competent employees for saw mills and woodworking plants are scarce. The best of them read this paper regularly. To get in touch with good men send a "Want Ad" to the

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Specialty --- Dimension Timber

HEMLOCK

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MILLS AT - - BARNET, B.C.TIES
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**THE MCGIBBON LUMBER CO.
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Don't wait to write. Phone us your requirements.

All stock sized or matched if required.

Our Yards are Unequalled for Drying Lumber

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Which is the most expensive operation?

In which is there the greatest need for improvement?

Why not improve it?

The Shaw Motor-Headworks is the
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Operated by one man.

Will tow 2,000,000 feet.

Is quick, light and reliable.

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**California White Pine
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Best Stock for Factory and Pattern Lumber

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Manufacturers of

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Mills at Victoria Harbor, Ont.

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Highest Grade

Extra Clear XXX

B. C. Red Cedar Shingles

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If you want quick delivery
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Spruce { 1 x 4-5-6-8 Dressed or Rough
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White Pine { 1 x 4 and wider Mill Culls
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Manufacturers: Honduras Mahogany and Southern Hardwood Lumber

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Mahogany, Quartered and Plain Oak and Quartered Red Gum

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Poplar and Cypress

A large stock of Ash continually on hand

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SALES AGENTS,
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Mixed Cars

Promptly Shipped

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Always on hand a full line of Spruce and
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For Quick Sale 1913 Summer Cut

Feet.

1 x 4, 5 and 7, 10/16 ft. Mill Run Norway, 44% 4-in., 41% 5-in., 15% 7-in.	150,000
1 x 6, 10/16 ft. Mill Run Norway	150,000
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5/4 x 4 and up, 10/16 ft. Mill Run Norway.	15,000
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Our Mills now ready to cut

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up to 12 x 12 — 24

We have on hand a full line of

Hemlock Lumber, Ties & Post

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Prompt Delivery guaranteed.

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Timber and Lumber Merchants

**Shippers of All Kinds
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When You Want Lumber From Such Logs

as these, we have the stock ready for you. Quality and service is the keynote of our success and by devoting our energy to the selling of Soft and Hardwoods we are able to give you attention that insures the acme of satisfaction. We are open to contract for our

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River Ouelle Pulp & Lumber Co.

Manufacturers of

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Lumber

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CORRESPONDENCE

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Mills at:

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**On I. C. Ry. 75 Miles East of
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The Saw-Mill Owners Sales Co.

Representing 22 Mills - 6 Branches

What about a mixed car of mouldings, turnings, doors with shingles and sidings.

Send for our latest catalogue.

It will pay you better than making them yourself.

Lumber of all kinds.

Your correspondence solicited.

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Everything in Lumber

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Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

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Mill: St. Gabriel de Brandon

Head Office: 524 Board of Trade, Montreal, P. Q.

Manufacturers of

Spruce and Pine Lumber and Ground Wood Pulp



MONTREAL - Canada

Large stock of 1" 1 1/4", 1 1/2" and 2" WHITE PINE, Bone dry.

10/13-ft. Spruce and Hemlock

Offices at
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Mills at
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The most efficient mill employees in Canada are regular readers of this paper. Get the best by advertising. Rates on request.

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HIGH GRADE RED CEDAR SHINGLES

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Selects
Shops
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Mouldings



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Timbers
Yard Stock
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Limited

Head Office: JAFFRAY, B.C.

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Is Our Particular Specialty

The Heavier it is the Better we like it

**We Dress from 1 to 4 Sides up to
16-in. x 20-in., 60-ft.**

Our grade is positively right, and prices will please

Timberland Lumber Co., Limited

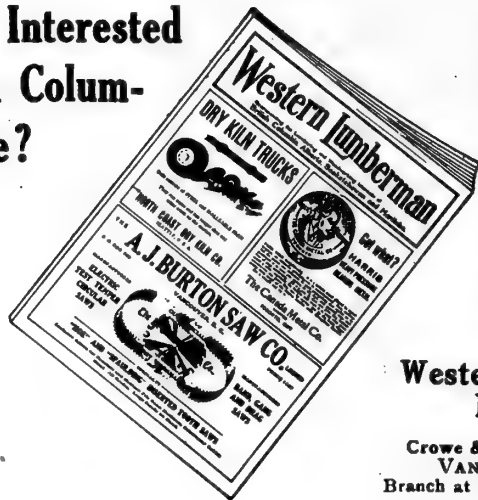
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Mills at Craigs on the B.C.E.R.

Shipment by C.P.R.R., G.N.R.R. or B.C.E.R.R.

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The immensity
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Industry will
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this Province
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There is un-
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market for Mill
Equipment of
all kinds. Let
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please others,
we can please
you.

**Western
Lumberman**

Crowe & Wilson Chambers
VANCOUVER, B. C.
Branch at Winnipeg

W. A. ANSTIE, Managing Director.

Forest Mills of British Columbia, Ltd.

Head Office: Revelstoke, B.C.

Mills at Taft, Three Valley, Comaplix, Cascade, Nelson

Manufacturers of

Lumber, Lath and Shingles

Specialties: WHITE PINE, WESTERN SOFT PINE and CLEAR CEDAR PRODUCTS

Special facilities for supplying the Eastern Trade

Eastern Representative

W. J. MacBeth, Toronto

We have the Goods We Want Your Orders

White and Norway Pine

Laths, Boxes, Box Shooks, Wooden Pails and Tubs

"WE AIM TO SERVE YOU WITH THE BEST"

We sell only the best that the woods can grow, manufactured by the best machines that man can make.

C. Beck Mfg. Co., Limited, Penetanguishene, Ont.

Dr. Stewart's Veterinary Remedies



THE SAME UNIFORM QUALITY THAT HAS
MADE THEM FAMOUS FOR 30 YEARS

Stewart's Sure Cure (antiseptic gall cure) the original in liquid form	8 oz. bottles	\$5.00 doz.
	16 oz.	9.00 "
Stewart's Excelsior Liniment	16 oz.	5.00 "
	32 oz.	9.00 "
Stewart's Lightning Colic Cure, the only colic cure that removes the cause	16 oz.	7.00 "
Stewart's Pure Condition Powders	2 lb. air tight can	4.50 "
Stewart's Hoof Ointment	1 lb. can	5.00 "
Stewart's Heave Relief	large can	5.00 "
Stewart's Cough and Distemper Cure	50 doses to bottle	7.00 "
Stewart's Proud Flesh Powders		2.50 "

Palmer's Family Remedies are Sold with the Strongest Guarantee

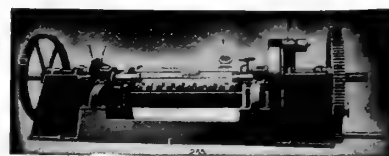
Palmer's Pine Balsam	\$18.00 per gross
" Laxa Grip Cure	18.00 "
" Pain Remedy	18.00 "
" Carbo-Healing Salve	18.00 "
" Stomach and Liver Pills	18.00 "
" Kidney Pills	18.00 "
" Wild Strawberry Cordial	18.00 "
" White Liniment	18.00 "

Palmer Medical Co., Limited, Windsor, Ont.

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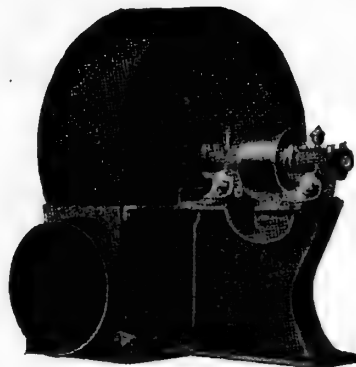
Veneer Machinery

THE "MERIT" LINE of Veneer Cutting, Dimensioning and Drying Machinery is designed first, for veneer mills cutting high grade furniture and commercial veneer from expensive timber, and second, for basket, crate, box and barrel factories using cheaper veneer cut from the less expensive woods.



Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.



WHY you should install the Mahony Blower

System in your Planing Mill

Fifty per cent. higher efficiency than any other on the market to-day, uses $\frac{1}{2}$ less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

A. Mahony, 512 Wellington West, Toronto

Thurston-Flavelle Lumber Company

MANUFACTURERS OF

British Columbia Red Cedar Exclusively

4, 5 and 6 inch "CLEAR A" Cedar Bevel Siding.

8, 10 and 12 inch CLEAR CEDAR FINISH.

EXTRA XXX RED CEDAR SHINGLES.

Eastern Agents, Gull River
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Head Office and Mills, Port Moody, B. C.

HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK
POPLAR ASH

Yards at Nashville, Tenn.

We can ship you promptly any of the above
Stock, Carefully Inspected
WE WOULD LIKE TO HEAR FROM YOU

Wistar Underhill & Nixon

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Manufacturers of Hardwoods—Any Thickness From

1/30" SLICE CUT VENEER

1/20" SAWED VENEER

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2" BAND SAWED LUMBER

Specialty:

QUARTERED WHITE OAK

Service First

We've got what you want
When you want it.

20,000,000 feet Dry Hardwoods for immediate
Shipment.

Any thickness Any grade Any width or length

Hardwood Specialists

Planing Mill Work. Dimension Stock.
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The Stearns Salt & Lumber Co.

Ludington, Michigan

W.M. RITTER LUMBER COMPANY

Below is a list of Dry Lumber
which we can Ship Promptly

POPLAR:

4/4 Panel and No. 1, 18 to 19 in., one car.
4/4 Panel and No. 1, 20 to 21 in., one car.
4/4 Panel and No. 1, 24 to 27 in., two cars.
4/4 1sts and 2nds, 7 to 17 in., four cars.
10/4 1sts and 2nds, 7 to 17 in., one car.
16/4 1sts and 2nds, 7 to 17 in., one car.

CHESTNUT:

4/4 1sts and 2nds, 1 face 6 and up, two cars.
4/4 No. 1 Common, 3 cars.
6/4 Sound Wormy, 3 cars.
8/4 Sound Wormy, 3 cars.

OAK:

5/4 1sts and 2nds, 6 and up, 3 cars.
6/4 1sts and 2nds, 6 and up, 4 cars.
7/4 1sts and 2nds, 6 and up, 3 cars.
4/4 No. 1 Common, 6 cars.
6/4 No. 1 Common, 3 cars.
7/4 No. 1 Common, 2 cars.
8/4 No. 1 Common, 2 cars.

RED OAK:

4/4 No. 1 Common, 3 cars.
5/4 No. 1 Common, 1 car.
6/4 No. 1 Common, 1 car.
8/4 No. 1 Common, 1 car.

* The above is a list of dry lumber which we can ship promptly.
All our own manufacture, band sawed, and thoroughly seasoned. Do not place your order before writing for prices.

Canadian Representative:

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W. H. DAWKINS LUMBER CO.

MANUFACTURERS OF BAND-SAWED

OLD-FASHIONED SOFT

YELLOW POPLAR

ASHLAND,

KENTUCKY

HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

THE W. E. HEYSER LUMBER COMPANY

Manufacturers, Wholesalers and Exporters of High Grade

West Virginia and Southern Hardwoods

15,000,000 ft. on hand at all times of dry Plain & Quartered W. and Red Oak, Poplar, Ash, Hickory, Gum and other Hardwoods.

Quick shipments direct from our own mills and yards.

Main Office and Yards, Cincinnati, Ohio.

Write for prices.

Sell Hardwoods in Canada

Reach the furniture factories, piano factories, sash and door factories through Canada's National lumber medium.

Published semi-monthly. Write to-day for rates.

Canada Lumberman and Woodworker
Toronto, Canada

CAFLISCH BROTHERS HARDWOOD LUMBER

Wholesale Distributing Yards and
Sales Offices

JAMESTOWN, N.Y.

Mills at—

Union City, Pa. Monticello, Ky.
Hambleton, W. Va. Ross Point, Ky.

Full assortment of grades and thicknesses in Quartered and Plain Oak, Gum, Poplar and other Hardwoods in our Jamestown yards.

STRAIGHT OR MIXED CARS.

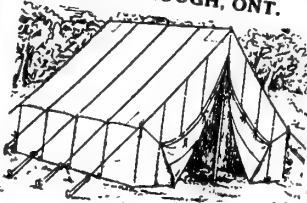
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Leading Firms

CATERING FOR
Mill, Factory and Camp Business

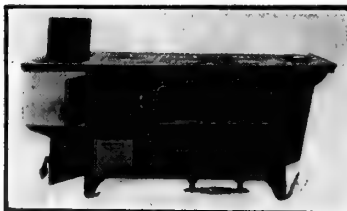
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PETERBOROUGH, ONT.



The largest Manufacturers and Dealers in Canada of Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Water proof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. Prompt shipments.



A good Steel Range for Camp Use

ALGONQUIN STEEL RANGE. Can be fitted to burn wood, coal or coke. Special price to lumbermen. Write us. NATIONAL MFG. CO., LTD. OTTAWA.

OATS, HAY,

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A. W. FAIRWEATHER,
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Dexter Horse Feed

Made from crushed oats and molasses, with a little barley, corn and bran.

An excellent food for Lumber and Logging Horses.

The Chisholm Milling Co., Limited
Jarvis Street. TORONTO

SAW MILL BELTING

Note our NET PRICES per foot on NEW RUBBER BELTING

4 ply.	5 ply.
8" at 31c	8" at 36c
10" " 40c	10" " 47c
12" " 50c	12" " 60c
14" " 55c	14" " 70c

Send for our Net Price List on Belting of every description,

N. SMITH, 138 York St. TORONTO, Ont.

Saddle Tank Locomotives Geared Locomotives Steel Rails Flat Cars

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Correspondence solicited.

SESSENWEIN BROS.
Montreal

Wing Screw Boot Calks

Made especially for Lumbermen



No. 5.

Send for samples and prices.

The Steel Co. of Canada, Limited
Hamilton, Montreal, Winnipeg

Maple Leaf Kanthurt Horse Collars

(PATENTED)

These collars will not hurt your horses' shoulders.

No. 62 Lumber. Hogshead face, \$37.00 doz.
Saddlery & Moccasins
S. & H. Borbridge
Ottawa, Ont.



Anchor Brand Oats

In Bulk or Sacks

The Best Oats on the market. Let us fill your next order and prove what we say.

Write or Wire for Prices.

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"VIVAT"

Specific for Horses

A quick remedy for Cough, Broken Wind, Heaves, Colics, Worms and diseases of the Urinary Organs. It is a powder, not a liquid.

Dr. Ed. Morin & Co. Ltd.
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W. H. Dwyer & Co., Ltd.

OTTAWA, ONT.

Offices also at Fort William and Montreal

Largest Wholesale Dealers
in Hay and Oats in Canada

Write or wire us at any of the above offices. We do the rest.
"HE WHO SERVES BEST PROFITS MOST."



HARNESS
COLLARS
SADDLES

TRADE MARK
"The Alligator Brand"
A complete line with several specialties for the Lumberman.

Lamontagne Limited.
Balmoral Block, MONTREAL

"Five Machines in One."



No. 5 Rounding, Chamfering, Planing, Shaping and Boring Machine.

Save a Dollar to a Pound a Day on this Machine

It is a practical machine for a practical man and fills a long-felt want in the vehicle repair shop. On this machine you can plane, bore and round, rims and felloes, poles, shafts, etc., as well as perform various other operations at a great saving of time over hand labor.

This machine is furnished complete with countershaft and is equipped as follows: one three-knife 6-in. buzz planer head with adjustable table and fence; three cornering and chamfering heads each fitted with knives, chip breakers and guides; one special expanding cutter-head with knives and one adjustable boring attachment with four boring bits. Write for descriptive circular and detailed quotation.

The Defiance Machine Works, Defiance, Ohio, U.S.A.



MAPLE LEAF SAWS

MAPLE LEAF SAWS, "THE PROVEN BEST," absolutely guaranteed. Be sure and specify Improved Racer Cross Cut Saw when ordering your camp supplies. They are made of Razor steel and tempered by our secret process, which gives the best results under actual working conditions in the bush.

Shurly-Dietrich Co., Limited, Galt, Ontario

Branch: VANCOUVER, B.C.

Pink's Lumbering Tools

The Standard Tools



Agents for Brazel Patent Snow Plow. Manufactured by Bateman-Wilkinson Co. Ltd. Toronto

Send for Catalogue and Price List
Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants

Finest Quality

Split Maple

Cant Hook and

Peavey Handles

Carload or dozen

Boom Chains

Pike Poles

Skidding Tongues

Boat Winches, etc.

Thos. Pink Co., Limited, Pembroke, Ont.



ADAMS

COAL-OIL POINTERS

A big advantage of the Adams Pointer is that coal-oil may be used as fuel instead of gasoline. This oil is found in every camp in the country, it is cheaper, safer and more convenient than gasoline and is just as satisfactory.

Adams Pointers reduce your river costs.

Adams Pointers do the work of from six to ten men. One man operates all machinery.

Adams Pointers carry your men to work and leave them fresh for the day's work.

Adams Pointers draw themselves over rapids and portages.

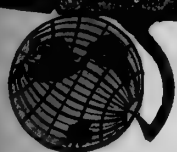
Adams Pointers can be used for warping and sweeping logs out of corners that an Alligator could not reach.

Our literature gives full particulars

Adams Launch & Engine Co.

Penetang, Ontario





Cant Hooks, Boom Chains, Timber Dogs

Our products are the result of over 60 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

Write us for particulars and prices

ARGALL BROTHERS Three Rivers, Quebec

Workers. Ordinary boots or shoes are useless where there is much dampness or wet. For thirty years we have been making our celebrated oil-tanned waterproof footwear from the finest leather procurable, tanned by our own secret process and known as Skowhegan Leather.

This footwear has been sold under the name of

Summer Packs and Harvest Shoes, made 3, 5 and 8 eyelets high for

use in and around the Mills, the Woods, on the Farm and in any place where hard serviceable wear is required. Made on right and left comfortable, easy-fitting lasts, light, but strong and durable. No more tired and burning feet. Made from Oil Tanned Skowhegan Waterproof Leather, with full waterproofed Sole Leather Sole and Heel and Solid Insole. Packed in cartons in 12 and 30 pair cases.

To introduce them let us send you a case at once.

John Palmer Co., Ltd.

Fredericton, N. B.,

CANADA

"CANADIAN MADE"

Fourdrinier Wires and Cylinder Covers

Manufactured in Ottawa by the

Capital Wire Cloth & Mfg. Co.

Dandy Rolls and Cylinder Molds

Repaired and Recovered

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

- 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
 - 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.
 - 1 Double cylinder steam nigger, right hand.
 - 1 Log Loader for right hand mill.
 - 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.
 - 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.
 - 1 left-hand steam nigger.
 - 1 Log-loader.
 - 1 Endless chain jack ladder with two kickers complete for right and left hand mills.
 - 2 Roger Gang Edgers for 8-in. cants and lumber.
 - 1 Waterous double edger, 6 saws.
 - 2 2-saw trimmers.
 - 1 20-ft. Slash table.
 - 1 16-ft. Revolving Slash Table.
 - 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.
 - 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.
 - 1 Lath Mill with bolter.
 - 2 Lath Trimming Saws.
 - 1 Automatic Machine for circular saws.
 - 1 Hand Machine for cut-off saws.
 - 1 Lap Grinder.
 - 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

 - 2 Double Duplex, high pressure Water Pumps.
 - 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
 - 2 125 h.p. Water Wheels.
 - 1 Upright Engine for sawdust conveyor.
 - 1 10 h.p. Engine.
 - 1 Mitts & Merrell Hog.
 - 1 Wood Machine for 22-in. wood.
 - 1 Wood Machine for 16-in. wood.
 - 1 Edger for ripping dry lumber, installed.
 - 1 Edger for ripping dry lumber, not installed.
 - 1 30 h.p. Generator, 250 volt.
 - 1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars

POWER PLANT

- 2 Double Duplex, high pressure Water Pumps.
- 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.
- 2 125 h.p. Water Wheels.
- 1 Upright Engine for sawdust conveyor.
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- 1 Edger for ripping dry lumber, installed.
- 1 Edger for ripping dry lumber, not installed.
- 1 30 h.p. Generator, 250 volt.
- 1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

Also, contents of machine shop, containing Planer, Drill, Lathe and Machinery, with tools necessary for repair work.

All of the above open for inspection
at Parry Sound.

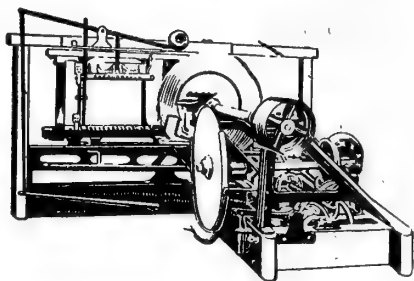
FILING ROOM

- 1 Automatic Filing Machine for 12-in.
D.C. band saws.
- 1 Automatic Grinding Machine for 8-in.
S.C. band saws.

The Parry Sound Lumber Co. Limited
26 Ernest Avenue, TORONTO, CANADA

16,000 to 45,000 good shingles per day of ten hours. YES, that's what ONE MAN WILL joint and sort when operating our

GENUINE "Dunbar" Shingle Machine



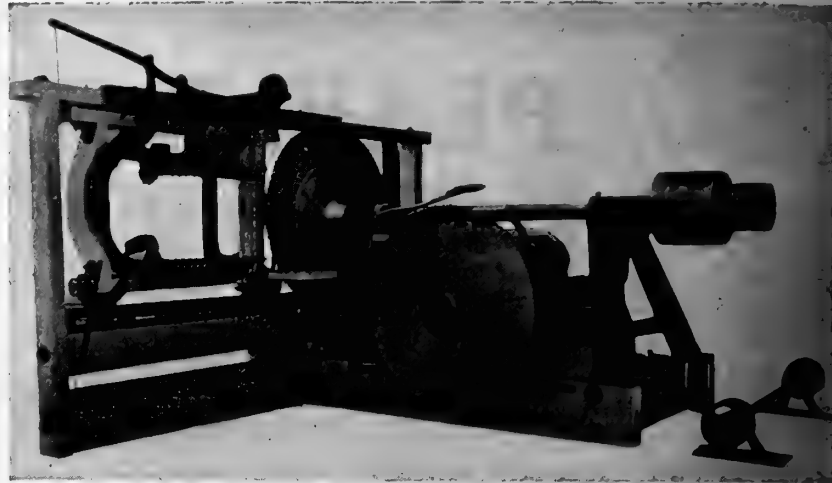
We are Pioneers in this line of work in the Dominion, and the "Genuine Dunbar" is manufactured only by us.

Write us for particulars of this, and also when in need of lumbering machinery and supplies.

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson Mfg. Co.

Fredericton, N. B.



"Dunbar" Shingle Mill

THIS mill is acknowledged the most complete and satisfactory shingle mill on the market. It has a capacity of from 15000 to 45000 per day according to the quality of the lumber.

Our literature contains full particulars.

Maritime Foundry & Machine Wks.

Limited

Chatham,

New Brunswick



THE PETER GERLACH CO.

MANUFACTURERS
AND BUILDERS OF

SAWS

CIRCULAR AND CYLINDER

MACHINERY

STAVE HEADING AND BARREL

TOOLS

SAW AND LOGGING

For the Manufacture of the following:

STAVES	HEADING
BARRELS	KEGS
COOPERAGE	WOODEN WARE
HOOPS	HANDLES
PAIS	TUBS
CHURNS	FREEZERS
CANDY PAIS	FISH KITS
BOX BOARDS	BOTTOMS
CHAIR STOCK	SHINGLES
CLOTHES PINS	LUMBER

COMPLETE PLANTS

FOR THE MANUFACTURE OF

BARRELS, KEGS, STAVES AND HEADING

OUR SPECIALTY.

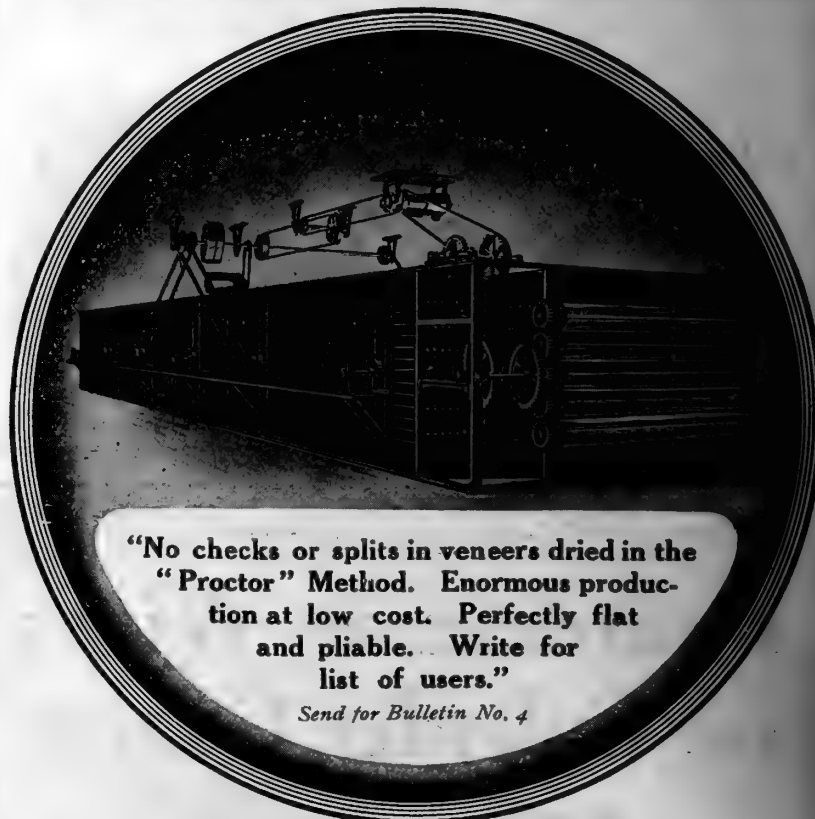
FOR PRICES AND FURTHER PARTICULARS,
ADDRESS

THE PETER GERLACH CO. CLEVELAND, O. U.S.A.





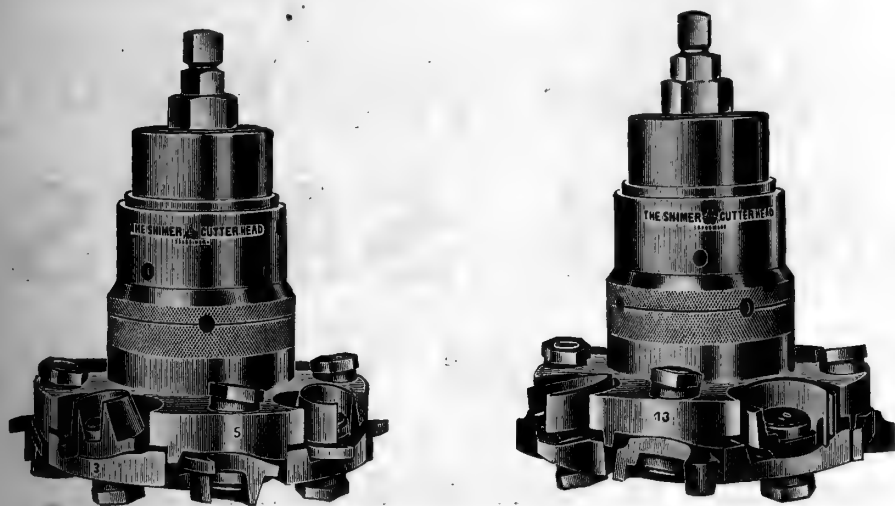
"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the "Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

Send for Bulletin No. 4

THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.



"The Shimer Limited" with Expansion \$72.46 per set, complete.

Increase Your Output with the Same Labor and Power Costs

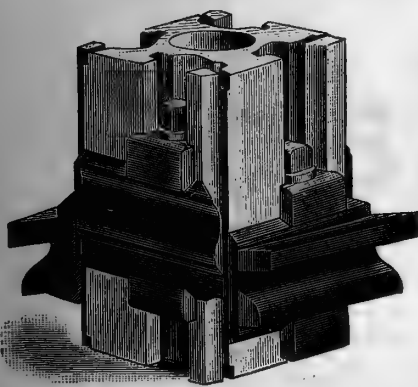
Shimer Cutter Heads increase the output by cutting down the waste labor, by faster feed and cleaner finish and by working many pieces in a satisfactory manner which ordinarily would have gone into the offal pile.

Shimer Cutter Heads are provided with Circular Bits, the shape of which never change when the Bits are sharpened, but remains the same until the Bits are entirely used up. This feature also guarantees a uniform product and that material matched or moulded today will fit with that made by the same set of Bits at any time previous.

Our 1914 Cutter Heads have every down-to-the-minute improvement for the saving of time and labor and appeal instantly to the practical mill man as tools that will enable his men to do good work and more of it.

Give them a trial for 30 days and be convinced of their merit by what they can do for you on your own machines.

The Shimer Combination Head for Doors, Sash, Blinds and Mouldings



The Head illustrated herewith is intended more particularly for the mills which make only a few mouldings or Door and Sash patterns and change work several times a day.

The outfit consists of one Combination Head with one set of Sash Bits, one set of Door Bits, one set of Cope Heads and Door Cope Bits, and two Sash Cope Bits for the lower Door Cope Head.

The Bits are quickly changed and set to the gauge, when the Door and Cope moulds or the Sash and Cope moulds will match to a nicety. Bits can also be adjusted for different thicknesses of Door and Sash mould.

Price of outfit complete \$47.31, guaranteed to be made of the best materials and sent on trial.

Planing Mill Supplies

We carry a full stock of many articles needed in a hurry by the mill man, and can fill orders promptly for anything in our line, such as Wrenches, Planer Head Bolts, Nuts, Washers, Gauges, Set Screws, Brass Washers for under Bits, etc. Prices as low as consistent with good work.

Our Popular Cutter Heads

Figs. 202 and 203 are the leading tools, having Conical Duplex Bit Seats and The Shimer Cutter Head Expansion. Flooring Bits will work from 13/16 to 1 1/2-in. in thickness with tongue and groove proportions expanded to suit.

Price, net, complete with one set of flooring Bits, the gauges for setting the Bits and wrench ... \$40.95
Extra Bits for Flooring ... 11.44
Extra Bits for ceiling ... 10.40



With 4 Bits to each Head.

Jointer Heads

Figs. 54 and 55, with four Bits in line of work, shear the cut downwardly to insure a sharp and clean upper edge. They cut clean and free and are shipped out under our guarantee to give satisfaction.

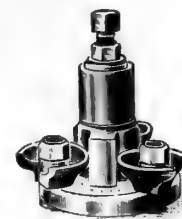
Price, Heads, complete with Bits for 15/16 to 1 1/4-in., net only ... \$31.20
Extra Bits 1 1/2-in. face, the set ... 10.40
Extra Bits, 2-in. face, the set ... 12.48



O. G. Batten Heads

Figs. 48 and 49 represent our best tools for this work, having 3 Bits in line of cut so arranged upon their seat inclines as to protect all but cutting edge against friction and wear.

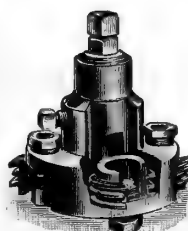
Price, two Heads, complete with Bits, net only ... \$31.98
Extra Bits, each, net ... 2.08



Double Ceiling Heads

Figs. 45 and 46 are made in solid section, steel forged, with Bits of special design to cut two tongues on one edge of board, and two grooves on opposite edge, to be re-sawed for two thin boards tongued and grooved. Very complete.

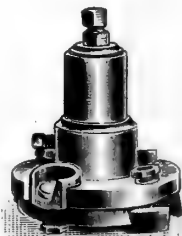
Price, with one set of Bits, set ... \$40.94
Extra Bits, per set of (8) ... 16.64



Ship Lap Heads

Figs. 38 and 39 are made of steel forgings, in solid section, designed especially for heavy duty. The bit seats have the latest improved slants to provide free cutting edges, and we sell them at the following low and net prices:

Heads with one set of Bits to work 15/16 to 1 1/2-in. thick, net ... \$34.84
Extra set of Bits ... 11.96



Door, Sash and Coping Tools

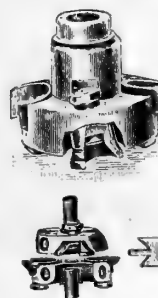
That save all the hand fitting. No changing of patterns, therefore, no trouble in framing door and sash parts when matched with the Shimer Cutter Heads.

DOOR AND SASH HEADS

Fig. 82, solid flange, Door Head ... \$10.75
Fig. 84, Expansion Door Head ... 13.35
Fig. 86, solid flange, Sash Head ... 9.75
Fig. 206, Expansion Sash Head ... 12.35
Bits to work 1-in. to 1 1/4-in. Doors, 4 ... 7.28
Bits extra to work 1 to 1 1/4-in. Sash (2 Moulded Bits, \$4.30; 2 Rabbinging Bits, \$2.86) ... 7.16

COPE HEADS

Fig. 83, Cope Heads (2) ... \$12.90
Coping Bits, each ... 1.43

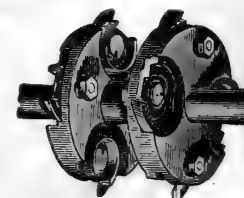


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Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Toronto, May 1, 1914

No. 9

B.C. Fir and the Panama Canal

What will be the effect of the opening of the Panama Canal upon the lumber trade of Canada? No one will be able to answer the question fully until trade has settled down into its new channels, but most of those who have been thinking of the matter have already found out, to their own satisfaction, that the effect will be wide-spread and important. By way of giving an instance which will indicate at the outset that the effect will be extensive, it is only necessary to mention the fact that the Panama Canal has already been the chief factor in the awarding of the contract for 24,000,000 feet of timbers to be used in Toronto's harbor improvement works, as reported in the April 1st issue of the Canada Lumberman. A small quantity of the timbers for this contract will be delivered by rail, but the contract is spread over four years, and after the opening of the canal to traffic, which is expected to occur about the first of July of the present year, the balance of the timbers will be shipped by vessel to some Atlantic coast port, and from there trans-shipped for carriage to Toronto. Here is a contract involving over \$250,000 taken in advance of the opening of the canal, which the canal has rendered possible. After the canal has come into operation and trade has settled into its new channels, it is reasonable to believe, in view of this preliminary example, that the possibilities for increasing the trade in British Columbia timbers in Eastern Canada and the Eastern United States will be very great.

At present, British Columbia timber and lumber pay a freight rate of 67c per hundred lbs. to Toronto from coast points. Fir in the rough weighs 3,200 lbs. per thousand feet, so that the freight rate figures out at \$21.44 per thousand feet, a pretty stiff handicap when the timber has to face competition from eastern products and southern pine. Under the rates which will be brought into effect by the Panama Canal, British Columbia fir from coast points will reach Toronto for a charge of about 40c per hundred lbs., which figures out at about \$12.80 per thousand feet. Between \$12.50 and \$13.50 is expected to be

the actual rate per thousand feet. This will mean a reduction in freight charges of between \$8 and \$9 per thousand feet and will enable coast manufacturers of fir to lay their products down in Toronto at less than the price of yellow pine. When one considers the increased trade in yellow pine which has developed during the last few years throughout all parts of Ontario and Eastern Canada generally, it is reasonable to conclude that the market for fir under the new conditions will be a large one. Shingles from the coast now pay 75c a hundred lbs., or about \$1.20 per thousand pieces. By way of the Panama Canal the rate will be about 65c a hundred lbs., or about \$1.04 per thousand pieces, making a reduction of about 16c per thousand pieces.

Under the above conditions the trade in Eastern Canada is likely to undergo important alterations. One of the most important changes is likely to be the development of large receiving and trans-shipping yards in Eastern Canada. For the accommodation of the trade, it is probable that companies will be formed in the east which will establish extensive receiving yards where vessel loads of British Columbia products can be stocked and sold to the trade in the required quantities. Such a yard at Toronto would be in an excellent position to handle a large share of the trade for Ontario. An average vessel carrying British Columbia timbers, by way of the canal, will probably hold one million feet or more and it would not require many of these cargoes to tax the capacity of the yards which now exist. Large assembling and trans-shipping yards would seem to be the natural solution of this feature of the situation. Under such conditions moreover, it would be possible for British Columbia fir lumber and finish to be shipped as part of a cargo made up mostly of timbers, thus enabling the whole of the coast manufacturing industry to take advantage of Panama Canal rates and get their share of the Eastern trade. Another manner in which it is possible that the problems of shipment may be solved, would be for a few large dealers in the east to join in making up a cargo. Take for instance a vessel load of British Columbia doors, which would probably swamp a single eastern dealer, under the conditions prevailing to-day. Two or three dealers might join in securing a vessel load, to be divided up among them. The door trade might even be handled by one large firm which would build a warehouse at an eastern point, such as Toronto, and carry in stock at all times a large quantity of British Columbia doors. There are numerous methods in which the trade may be handled. These instances are simply mentioned, to show that, so far as the actual handling problems are concerned, they can be readily looked after and will find the most advantageous solution shortly after the trade opens up.

The solution of price problems, once British Columbia fir reaches the east in large quantities, is a matter of much greater importance than any of those which have been mentioned above. It is already being discussed with great concern by eastern manufacturers of spruce, pine and hemlock and the manufacturers of southern pine. A large New York firm of wholesalers, discussing the situation says:—

"Unquestionably, Pacific coast lumber and timber will be marketed on the Atlantic in unknown volume after the opening of the Panama Canal, which Colonel Goethals promises to be not later than early in July. The eastern and West Virginia spruce manufacturers, as well as the producers of southern pine lumber and timber, cannot be expected to retire forthwith from the markets they have heretofore enjoyed. Furthermore, a point worthy of serious consideration is the fact that slaughter prices will not and cannot produce increased consumption sufficient to admit of calculation.

"Those lumbermen whose opinions are most sought are a unit in the firm conviction that permanency, with the least revolutionary adjustment of the necessary changes in trade conditions, can be accomplished only through organization. We have long since awaited the announcement that important interests on the Pacific coast had combined with some well-established Atlantic coast corporation or corporations, with the object of an intelligent disposition among an established clientele, of a large portion of Pacific coast shipments.

"It seems that almost every producer, large and small, is going in

'on his own hook,' and a great many so-called lumber salesmen are offering the stock. If added emphasis is needed to convince an individual that he is not a salesman, it is to be conscious that he has offered stock to a prospective buyer at a lesser price than the buyer anticipated paying. This fact is true in numerous instances of recent offerings of Pacific coast timber on this market when blanket prices of \$21 per M. delivered on dock this port, have been quoted, with buyer's privilege of making out a dimension specification in sizes and lengths to suit himself \$4 per M. in excess of this figure would suit the buyer as well and still equal or be under the quotations on competitive stock.

"Are the Pacific coast manufacturers not satisfied with the competition they have to meet in Atlantic coast stock, or is it their further object to cut every cent of possible profit out from under each other?"

"For more than half a century we have fought to maintain and advance the prices of lumber, but now venture to predict with a word of caution, that if the indecisive, haphazard, go-as-you-please methods continue (granting, of course, that any considerable volume of business is transacted) a lower range of prices will prevail in the eastern markets after July 1st than has been known in the last double decade. Co-operation is imperative if the evils forecasted are to be avoided."

There is no doubt that the views expressed by this New York

firm are held by many other eastern dealers. They contain a warning to the manufacturers of British Columbia, which—if they desire to make the eastern markets profitable and thus remedy the depressing trade conditions which have existed on the coast for many months, as a result of over-production and restricted demand—they must bear in mind very seriously. At the commencement of these greatly extended trade opportunities, it is of vital importance that the manufacturers of Pacific coast products should do their utmost to establish the trade upon a basis of reasonable profit, to which end co-operation on the part of coast manufacturers would be essential.

The importance of the opportunities which will develop, after the opening of the Panama Canal, has led the Forest Branch of the B. C. Lands Department to consider the opening of a branch office at Toronto for promoting trade in B. C. timber and its products. Mr. H. R. MacMillan, Chief Forester for B. C., visited Toronto recently in this connection and enquired into the wisdom of such a course. The result of his visit was that such a branch office will probably be established at once. The idea is to occupy an attractive, centrally located office where B. C. timbers and lumber and their products can be attractively displayed, and to gather information regarding trade opportunities which will be forwarded to the trade in B. C. An office of this nature would unquestionably exert an important influence in the direction of increasing the demand for B. C. products.

Anxiety Prevails Regarding Driving Conditions

The most important matter which is attracting the attention of the lumbermen of Ontario to-day, outside of the uncertain trade conditions which are prevalent, is the fact that from many parts of the province reports have been received that the quantity of water in the rivers of Northern Ontario is comparatively small, and that there is likely to be insufficient water for the drives. Whether this would be altogether an unmixed evil under present market conditions is a matter of dispute, but that it is unfortunate from the point of view of the manufacturer is unquestionable. There are still factors to be considered which may prevent low water. If plentiful rains come and if the thick ice, which still remained in the lakes at the end of April, does not all melt away gradually and be of no use to the drives, it is quite possible that there will be good driving conditions.

Always at this time of year a great deal of discussion and more or less anxiety regarding the drives develops and it often happens fortunately, that the results of the drives are much better than was hoped for. At present, however, there is much more anxiety on this

score than in former years. The results of the next few weeks are likely to have a very distinct bearing upon the market conditions which will prevail this summer.

Some of the conditions which are now feared, as involving bad driving results, were such as to make operating conditions in the woods more successful than usual last winter, and the output is reported not only to have been large, but to have been secured in some cases at very favorable costs. Under such conditions, with good driving, the quantity of lumber placed on Ontario markets this year would be large. This quantity would be increased also on account of the fact that last winter's severe storms blew down vast quantities of trees which have to be taken out of the woods to avoid destruction and to remove fire danger.

Taking conditions all round, there are more elements of doubt in connection with the outlook for this year's trade than in almost any recent year. If fine weather arrives soon and the drives are even fairly successful, much of this doubt will be removed.

Toronto Lumbermen's Club Making Progress

The plan for the formation of a Toronto Lumbermen's Club made considerable progress at a second meeting which was held on April 24th. Many of the most prominent members of the trade in Toronto were present at this meeting, and took part in the discussion which followed the holding of an informal luncheon. The upshot of the meeting was a decision to hold three informal luncheons during the following week and to start the club in this manner. After holding a number of these meetings, it will be possible to form a very definite opinion as to how the trade takes to the club idea, and as to the best methods for carrying it out.

The formation of lumbermen's clubs is a comparatively recent development in the United States and probably about a dozen successful clubs have already been formed across the border. These clubs have been successful from the outset. In some cases they have had for their chief object the development of a better feeling of fellowship among the members of the trade. This result has been secured in a remarkable degree. Members have found that they could count, in dollars and cents, the advantages which they secured from this better knowledge of one another. They have found also that the actual conditions under which they carried on their business were far more pleasant, when they had a more intimate acquaintance with the men with whom they were doing business.

Another object with some of the clubs which have been formed in the United States, is the exchange of confidential information as to the financial standing of customers. Whether this plan can be carried out in a club which is made up of wholesalers, retailers and manufacturers, is a matter of doubt, although it seems reasonable to assume that some approach to a plan of this nature might at least be made.

There are other objects than those which have been mentioned in connection with the formation of such a club, but they are of less importance and are of such a nature that they can be developed later on as a club grows, and begins to feel the necessity for increasing its activities and its usefulness. Various plans are carried out in the United States clubs for promoting the general interests of the trade. One of the most successful of these clubs holds frequent meetings at which important addresses are delivered upon matters of importance to the trade. The same means is adopted for bringing to the attention of large consumers, architects, contractors, etc., the proper uses to which various woods should be put. The interests of the manufacturers of native woods are thus promoted and foreign woods are more properly appreciated and their right uses made more general. One of the most important effects of work of this nature, on the part of the club in question, is that it has been able to secure the sympathetic understanding of the architects, and to educate them to a much better

knowledge of the proper uses of each kind of wood. Every now and then, this club gives a luncheon or a dinner, to which the architects are invited. An address or a discussion follows the meal. Good fellowship and a more efficient knowledge of the uses of wood are thus promoted.

There is so great a tendency on the part of business men of all kinds to allow the growth of their business to absorb so much of their time that their opportunities for meeting one another are continually being reduced. By forming and using a club this tendency is counteracted. Not only is good fellowship promoted, but by discussing trade matters with one another more frequently, the members obtain a far better knowledge of trade conditions than would otherwise be possible.

It is not presumed that Toronto's Lumbermen's Club will achieve all these results as soon as it is formed. But it is certain that they will commence to develop early; in fact they have already commenced to do so. The members have adopted a wise course in deciding to proceed slowly and feel the pulse of the trade before attempting to decide matters as the securing of permanent quarters and the determination of the amount of the fees. One of the most interesting features of the scheme, so far, is the fact that interest is being shown in it from outside points. Several members have already joined from large cities outside of Toronto, both in Canada and the United States. They realize that a central place of meeting such as a club would provide would greatly facilitate their business when in Toronto. It would also increase the importance of Toronto as a lumber market.

The Ontario Workmen's Compensation Act

An interesting letter upon the Workmen's Compensation Act for the province of Ontario, written by a prominent firm of lumber manufacturers in Eastern Ontario, is published on another page of this issue. The latest information available before going to press was to the effect that this bill would have received its third reading before May 1st, and for this reason the chief objects of the letter, which were to strengthen the opposition to the measure in its present form, and to prevent it from being enacted, cannot be achieved. The passage of the bill alters the whole situation, and now makes it incumbent upon those who desire to see the system of paying compensation to workmen for injuries, established upon a successful basis, to direct their efforts towards co-operating with all who are seeking to assist the administering commission which will be appointed, in coping with the difficulties which will inevitably arise under the act.

Previous articles in the Canada Lumberman have discussed the difficulties which the bill is likely to create. With the bill in the form of a law, it is probable that the correctness of the criticisms which have been made will be demonstrated and that the administering commission will need, and will welcome, anything in the form of con-

structive criticism which is offered. For this reason we hope that readers of the Canada Lumberman will look over the letter referred to above and also consult a few of the back numbers of this journal in which the question has been discussed, especially the issue of April 15th, and will then make their own views known. One of the best methods for doing this is to send a letter to us for publication. Such letters, appearing in our columns, will be brought directly to the attention of the government whenever they contain suggestions which are likely to assist. The whole question is one of the gravest importance to the lumbering industry, because the working out of the measure successfully will improve, a hundred fold, the conditions under which the industry is carried on, whereas, the bill, as it stands, contains elements which may be developed in such a manner as to place upon the industry a burden which many lumbermen will not be able to bear. The wide powers which are being given to the commission, to interpret, and even to alter the provisions of the act, place upon it a great responsibility, and the manufacturers of Ontario may render an important service to the province, at the same time protecting their own welfare, by showing a lively interest in the question.

United States Lumber Production

A report recently issued by the United States Census Bureau gives details of the production of lumber, lath and shingles in the United States during the year 1912. Reports from 29,648 sawmills show a total production of 39,158,414,000 feet as compared with 37,003,207,000 feet from 28,107 mills in 1911.

The State of Washington leads in quantity of lumber produced with a total of 4,099,775,000 feet and is followed by Louisiana, Mississippi, North Carolina, and Oregon in the order named.

On the whole, the report says, the showing for 1912 reflected improved conditions in the lumber industry. The total production was greater than in 1911 by 2,155,207,000 feet or 5.8 per cent. The reported production in Washington was the largest recorded since 1906. It is not improbable that in the near future, Washington will pass the record made by Michigan in 1890, when a production of 4,311,240,000 feet was reported.

Of the 55 woods manufactured into lumber, 14 were soft woods and 41 hardwoods. The soft woods contributed 78 per cent. and the hardwoods 22 per cent. of the total cut. Yellow pine supplied nearly one-half of the total output of soft wood lumber and, together with Douglas fir, white pine and hemlock, more than 5/6. Oak supplied 38.4 per cent. of the output of hardwoods and ranked third among all classes of woods.

The total production of yellow pine was 14,737,052,000 feet and Douglas fir which came second showed a total of 5,175,123,000 feet.

Hemlock lumber appears to have passed its greatest production, at least so far as the eastern species are concerned. It is not impossible that, when the western hemlock resources are fully developed the annual production may again rise until it approaches, if it does not equal the highest output in the past. The total production of hemlock was 2,426,554,000 feet.

The output of spruce lumber has been declining for several years, and in the east the decline may be expected to continue because all the principal sources of supply are now contributing and many stands are decreasing.

The production of the western species, may increase in response to the demand. The total production of spruce of 1912 was 1,238,600,000 feet.

The finest western pine is found in California on the western slopes of the Sierra Nevada Mountains, where trees 4 ft. in diameter are common and some are twice that size. The lumber production from this pine does not seem to be increasing. The quantity of valuable timber is very large, but the cut is limited by what the market will absorb. In 1912 the cut was 1,219,444,000 feet.

The production of shingles has declined slowly since 1909, and was smaller in 1912 than in 1908. Western red cedar, sawed most extensively in Washington, Oregon and Idaho, is the leading shingle wood and has supplied from 70 to nearly 80 per cent. of the total output each year since 1908. The production of shingles in 1912 amounted to 12,037,685,000 pieces.

The production of lath has shown a downward tendency during the past eight years and the figures for 1912 are the smallest for the whole period. The production in that year was 252,000,000 pieces smaller than in 1911 and 984,000,000 pieces below that of 1909.

The average value of all lumber cut in 1912, compiled from "mill-run" values was \$15.35 per M. feet. The average for softwoods was \$14.54 and for hardwoods \$18.25 per thousand feet. The average value for 1912 was 30c greater than for 1911, due to the rise in value of yellow pine, Douglas fir, white pine, oak, hemlock, and spruce, which together constitute nearly 77 per cent. of the total lumber production in 1912. The most expensive hardwood lumber in 1912 was tulip poplar.

Ottawa Valley Freight Rates Case Lumbermen's Club Making Progress

Railway Seek to Increase it from 5 to 6 cents per Hundred Pounds—Board Reserves Judgment

Ottawa, April 21; (Special to the Canada Lumberman).—Objection to the proposal of the railways to increase their summer export rates on lumber, from points throughout the Ottawa Valley to Montreal, was voiced before the Railway Commission today; on behalf of the lumbermen interested, by Mr. Frank Hawkins, secretary of the Canadian Lumbermen's Association. After hearing some discussion, the Board decided to reserve judgment. Meanwhile the increases, which were to go into effect on May 4th and May 6th, are suspended.

When the case was called Mr. Hawkins said the lumbermen would like to have an explanation of why the railways propose to make the increase.

"It comes down to a question of whether the railways have a right to disregard water competition?" said Chief Commissioner Drayton. "Are you willing to disregard water competition?" he asked of E. P. Flintoff, counsel for the C. P. R., and the answer was in the affirmative.

Mr. Hawkins informed the board that prior to May, 1908, the summer schedule of rates on export lumber was four cents per 100 pounds and five cents per 100 pounds domestic rate from Ottawa Valley points to Montreal. In May of that year both rates were increased to five cents, or an increase of 17.36 per cent. Now it is proposed to advance the export tariff to six cents, making a total increase since prior to 1908 of 36.42 per cent.; and this without even the usual thirty days' notice, for the notification of the latest increase, to go into effect early in May, was given only on April 20th. Not expecting the six cent rate to go into effect, lumbermen had done business on the basis of the five cent rate and consequently stood to lose heavily if the railways were allowed to act as they desired.

Mr. Hawkins was supported in his argument by Mr. J. C. Walsh, tariff expert of the Canadian Manufacturers' Association, and Mr. W. S. Tillston, representing the Montreal Lumbermen's Association.

Mr. Flintoff sought to show that there was nothing radical or harmful in what the railways proposed to do, but admitted that they were actuated to attempt to make the increase by the fact that water competition between Ottawa and Montreal had practically disappeared.

On April 15th the domestic rate was increased from five to six cents per 100 pounds. The winter rate is seven cents. Whether the board will decide to cancel the recent increase in the domestic rate remains to be decided.

Already at Work on Toronto Harbor Timbers

Mr. C. C. Yount, general manager of the Empire Lumber Company, from the large timber holdings of which, at Cowichan Lake, Vancouver Island, the timber will be secured for the Harbor works at Toronto, is now busily organizing his staff at Victoria, B.C. In a recent interview upon the subject, he said:—"We are already at work in the execution of our contract for supplying timber for the Toronto harbor works. At present we are employing a staff of 200 men at the scene of operations at Cowichan Lake. These men are getting out the big timbers which are forwarded to Genoa Bay, where the mill of the Cameron Lumber Company cuts it to the required dimensions. We have experienced some difficulty in getting sufficient cars to meet our present needs, but this disability will, we expect, be overcome very shortly. We purpose installing more logging engines just as soon as the season is a little more advanced. The order for these engines has already been placed.

"The contract calls for the delivery of 24,000,000 feet of timber. At first we shall ship over the C. P. R. as fast as the timber may be required at Toronto, but we purpose shipping mainly through the Panama Canal. The canal, we understand, will be available for use on July 1, next. I have the personal assurance of Colonel Goethals to this effect. It will not formally be opened for general traffic until January, 1915. As to our projected large mill at Crofton, I can only say that we stand ready to take this work in hand just as soon as the business outlook warrants such a large expenditure. All our plans have been perfected, and it is now entirely a question of business judgment as to the appropriate time for making a commencement."

Speaking of the effect on the Pacific coast section of the continent of the opening of the Panama Canal, Mr. Yount was strongly of the opinion that it could not fail to have a profound effect on the development of the entire country. Reducing by one-half the distances of the water-carrying routes of the world, could not, in his opinion, fail to alter the face of things generally and bring about a stimulus in development, heretofore undreamed of. Mr. Yount added that he was confident that President Wilson's plea for the repeal of the clause exempting American ships from canal tolls would pass the Senate.

Toronto Trade Discuss Details and Arrange for Three Luncheons at Which to Draw up Further Plans

Arrangements for the formation of a lumbermen's club for Toronto were materially advanced at a meeting at the Prince George Hotel on Friday, April 24th. There was a good attendance, and, after luncheon had been disposed of, those present adjourned to a private room to discuss the proposed club. Mr. J. L. Campbell, of Campbell and Johnson was appointed chairman of the meeting. The proceedings of the first meeting which was held on Friday, March 13th, were explained and a discussion ensued as to the best manner in which to start the club.

A committee which was appointed at the previous meeting to look into the matter of securing quarters reported that, for three days in the week, good accommodation could be secured for luncheon at the Dorothy Jane Tea rooms in the Yonge Street Arcade where luncheon would be served and a private room reserved. Adjoining this room is a smoking room which members would also be able to use. The dining room would accommodate about fifty people.

A lengthy discussion then ensued as to the manner in which the club should be started, whether regular days in the week should be set aside for luncheon at some convenient restaurant or lunch room, or whether a regular club should be formed in the first place, with permanent quarters.

Mr. W. J. Lovering, in discussing this, said that he believed the best method would be to hold two or three luncheons a week during the first month or so and discuss matters in an informal way. It would then be possible to settle their plans much more definitely and they would see whether arrangements for permanent quarters or daily luncheons would be feasible.

Several members discussed this matter and some were in favor of holding luncheons daily from the outset. The general opinion, however, was that, for the first few weeks the meetings should not be so frequent, but that two or three in a week would be sufficient.

On motion by Mr. Jas. Lauder seconded by Mr. Lovering, it was decided to hold the meetings three times a week at first, with a view to having more frequent meetings as soon as feasible.

Mr. G. W. Boake, who was one of a committee appointed at the previous meeting to secure members reported that 29 members had already joined and paid the provisional fee of \$10. He had also a list of 60 other names which would be canvassed as soon as possible.

A discussion followed as to the membership in the club, the question having arisen whether one membership would include all the members of a firm or whether membership should be considered as individuals. It was the general opinion that if a permanent club with various club privileges were formed, the membership should be individual. It was also thought that, from the outset, the individual membership idea should be adopted, although, at present, if any member desired to bring travellers belonging to his firm, or his partners to the luncheons they would be welcome. A short discussion also took place upon the question of fees and Mr. Boake reported that the provisional fee of \$10 was generally considered to be quite reasonable, no objection having been made to it. The final disposition of this matter was postponed until some subsequent meeting when the plans for the formation of the club have become more definite.

A motion was then carried that a notice should be sent out to all the members of the trade in Toronto to the effect that three meetings would be held during the following week. The meeting then adjourned.

A Market in England for Canadian Wheels, Spokes, Etc.

The Canadian Trade Commissioner at London, Eng., in a recent report says:—"Having been requested to ascertain the prospects existing at the present time in the United Kingdom for Canadian wooden wheels and accessories, such as hubs, rims, spokes, shafts, etc., inquiries have been instituted among leading representatives of the trade. One of the most striking features disclosed by this investigation is the gradual and steady falling off in the use of wooden wheels as the direct result of the growing popularity of motor-propelled traffic. Upon general lines, the principal wooden wheels which are now used to any considerable extent in England are those connected with large drays, wagons and vans, and quite small vehicles, such as milk barrows, etc., and the former, the large wheels, are almost exclusively manufactured in this country, although spokes and certain other component parts are frequently imported.

"Under these circumstances there has been a large decrease in the importation of wooden wheels generally. These came formerly almost wholly from the United States, but the fact that the increased demand for American wheels in the home market has reduced the quantity available for export almost below the demand still left in the United Kingdom, with a rise in prices, would cause a fair opening for Canadian wheels were it not that latterly Sweden has taken a hand

in the business, and is at present sending certain varieties of small wheels into this country at prices stated to be 15 to 20 per cent. below current American quotations. All the same, there appear to be several firms in the London district who are prepared to import from Canada certain varieties of wheels, for the disposal of which they have a connection, provided that satisfactory arrangements can be concluded for regular supplies.

"As regards spokes and hubs, the outlook is distinctly more favorable, and it would seem that considerable quantities can be placed over here, if Canadian manufacturers are prepared to sell at competitive prices. Oak spokes are in greatest demand, but hickory is used to some extent. In this connection it should be noted that the spokes required are of English pattern, which differs essentially from what is known here as the 'American' type, the kind mainly used in Canada, and any Canadian manufacturers taking up the business would have to adopt the English pattern, because others are practically unsaleable here. For a similar reason, many of the goods made by Canadian manufacturers, being destined for vehicles which are unknown in Great Britain, could not be sold here under any circumstances."

Canadian Maple Rollers in England

During the past season of St. Lawrence navigation, 1,315 bundles of these blocks reached Manchester by direct steamers from Montreal, and 364 bundles and 14,543 single roller blocks during the preceding St. John and Halifax season.

The general run of sizes is as follows: 26-in. x 6½-in. diam., 26-in. x 5¾-in. diam., 22-in. x 6½-in. diam., 22-in. x 5¾-in. diam., with a small percentage of smaller sizes.

The blocks are octagon shaped, and should be made from hard rock-maple, sound, free from knots, shake and splits, and evenly manufactured, and the ends should be painted or tarred.

Canadian exporters should be getting more of this trade and the Trade Commissioner at Manchester reports that he would be pleased to put them in touch with importers in the district.

How Can Small Walnut Pieces be Used?

The large quantity of waste lumber produced in woodworking establishments, especially those which use the more valuable varieties of lumber in the manufacture of furniture, etc., presents a problem which is becoming rapidly more important, with the advance in the cost of producing the lumber itself. An extensive Toronto manufacturer of furniture has found it necessary to get rid of material of this nature, even at a loss, so as to prevent it from accumulating. Large quantities of valuable wood, such as high grade walnut, are included in the waste and he would like to get into touch with firms who could make use of this wood in small pieces.

Enquiry recently made of the Forestry Branch of the Department of the Interior at Ottawa brought the following reply:—"The solution of any such problem depends on so many factors that a general statement would be of little or no value. Much would depend on the size of the waste. It is often the case in the utilization of small pieces, even of valuable woods, that the cost of handling, sorting, cutting, etc., is prohibitive. Many woodworking machines are designed to take raw material of certain dimensions and the cost of reducing the waste to these dimensions often exceeds the saving accomplished in using waste instead of large-sized lumber. Small waste pieces of walnut can be used in making boat and canoe trimmings, small wood carvings, gun, pistol and air-gun stocks and fore arms, bases for small pieces of electrical apparatus, telephone boxes, battery boxes, blocks for cuts and engravings, built up billiard cues, brush backs and handles, tool handles, clock cases, parqueting flooring, knobs for drawers, auto trimming, small patterns, bungs, brackets, gavels, stereoscopes, picture frames, tennis racquets, and innumerable small novelties and toys.

"Whether or not the manufacture of any such commodities from waste would be profitable in this particular instance is another matter. The size of the pieces is perhaps of first importance, then the cost of manufacture must be considered and a market for the products assured. If the manufacturer would write to this branch, giving full details as to size of waste, we might be able to give him some further suggestions."

Any readers of the Canada Lumberman, who can furnish information upon this subject, are requested to write to the Editor.

In the Ontario Legislature recently, the opposition asked for information regarding the quantity and quality of the timber on the townships of Thistle and McWilliam which were recently sold. The government declined to make the information public, claiming that it was contrary to precedent to do so, and that it might affect the interests of the purchasers, in case they wished to sell the property at some later date.

Death of W. T. McLaurin of Montreal

Montreal, April 20th (Special to the Canada Lumberman): Mr. W. T. McLaurin, a prominent retail lumber dealer of Montreal, died on April 17, after a week's illness from pneumonia. Mr. McLaurin, who was 53 years of age, belonged to a family with long associations with the lumbering trade, and was engaged in the business all his life. He was a native of East Templeton, P.Q., but spent several years in Manitoba, afterwards going to Kansas. On returning to Canada he became interested in the firm of McLaurin Bros., Montreal, and later started the McLaurin Lumber Company, whose yards are on St. Catherine Street East. Mr. McLaurin was past master of Mount Moriah Lodge A.F. and A.M.; Past District D.D.G.M.; Past Z., Montreal Chapter; Past Preceptor, Richard Coeur de Lion, 32nd degree Scottish Rite; a member of the Mystic Shriners; vice-president of St. George's Snowshoe Club, and a member of the Caledonia Curling Club for twenty years. He is survived by a widow, two daughters, the Misses Bernice and Clarissa McLaurin, and three brothers, Mr. Alex. MacLaurin, of the Charlemagne and Lac Ouareau Lumber Company, Campbell-McLaurin Lumber Company, and other lumber companies; Mr. L. K. McLaurin, of McLaurin Bros., Lachine, and Mr. John R. McLaurin, of Ellsworth, Kansas. The remains were followed to the graveside by hundreds of prominent masons and business men of Montreal.

What Constitutes a Good Yard Manager?

The successful management of a retail lumber business is a bigger job than the average lumber dealer realizes. Yet when you stop to consider that a well stocked retail lumber yard represents an investment of \$10,000 to \$15,000 and sometimes more, is it any wonder that it requires a big man mentally to manage it successfully—a business man in the fullest sense of the word? says a writer in the American Lumberman.

The great trouble with the lumbermen, and especially is this true of the yard managers for line-yard concerns, is that they have not been educated for retail lumber merchandising. I will venture to say that not one in ten could intelligently explain how shingles are made, tell what a gang saw is, or what raw materials are used in cement and the process of manufacturing it. Yet they handle and sell all of these commodities every day. How many know why plaster in summer time, when it is a little old, works "short," as the masons say, and know what to do to remedy it? These are only a few of the many commodities that the lumberman handles and of which he should have a thorough knowledge.

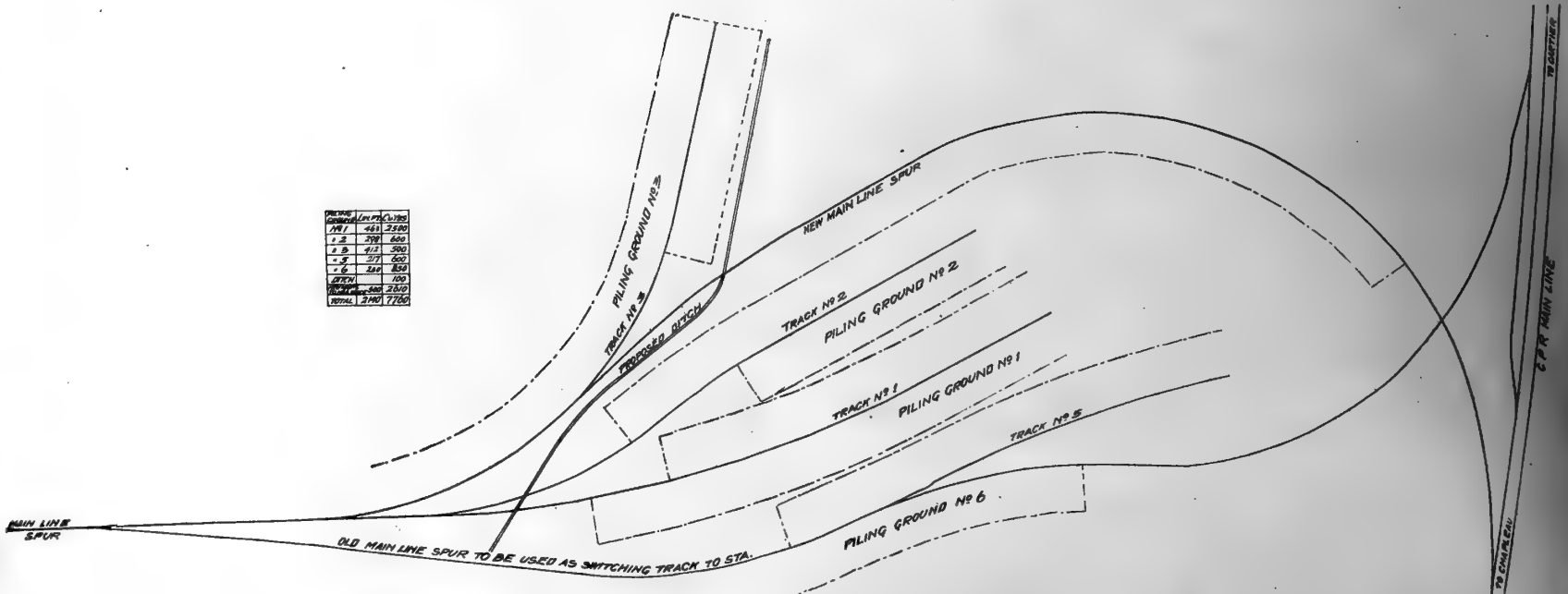
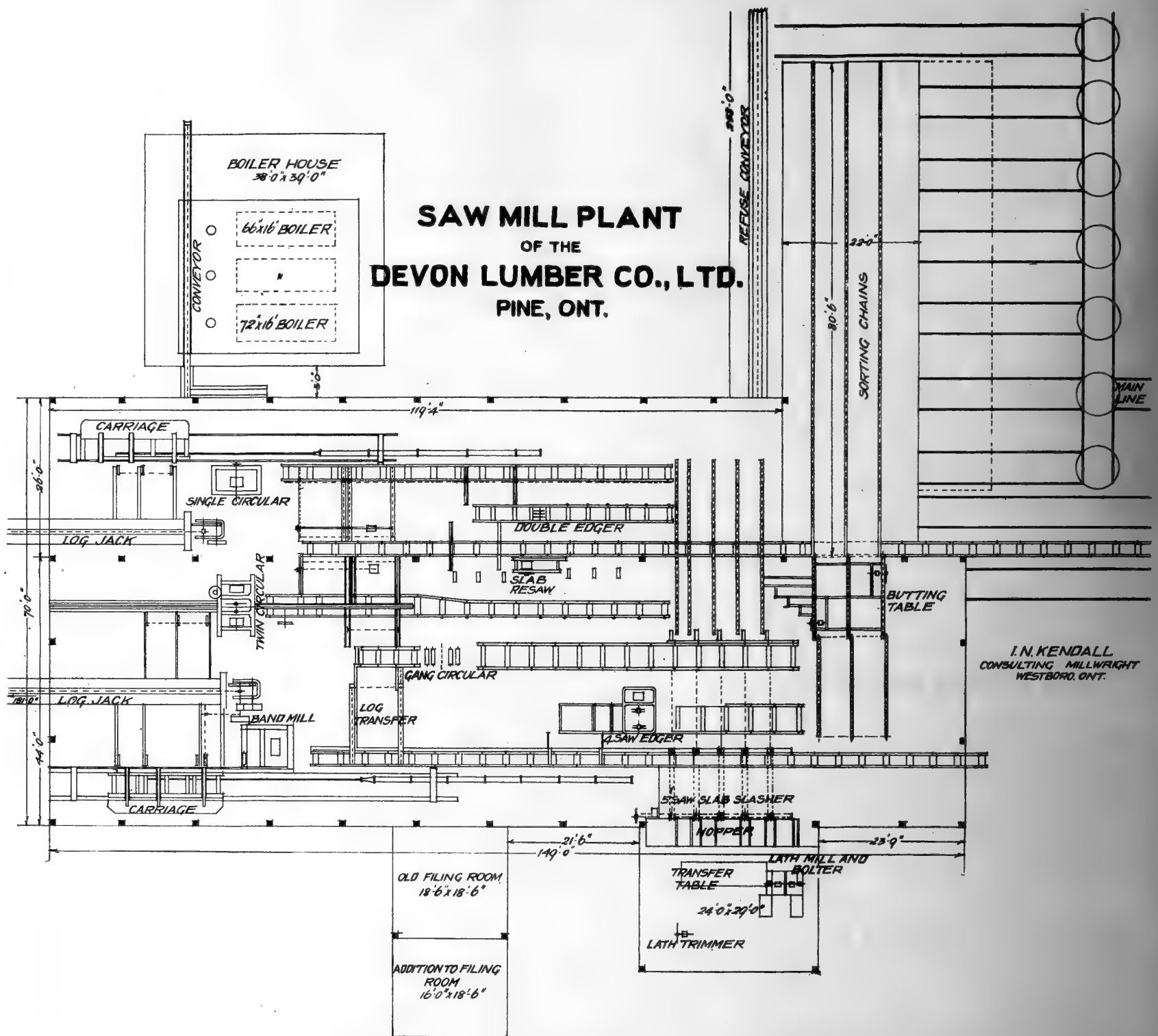
A well stocked lumber yard handles practically all the materials necessary for the construction of a building, and the successful manager should be familiar with plans and specifications, and if necessary should be able to take off from the blue prints a list of materials required for a building. In fact, he should be so familiar with the building business that his trade would come to look upon him as an authority on construction, and come to him for advice before building, which would give him a decided advantage in securing the order for the bill.

A good yard manager must also be an all-round office man. By that I mean he must be a good credit man so that he can intelligently decide when to grant credit and when to ask for the cash; and having sold for credit he must be a good collector, for no matter what his profits may be, he has not secured them until he has collected his accounts. He must also know enough about accounting to keep his books not only correct but in such shape as to know which commodities are making him money and which commodities he is selling at cost. Most important of all he should be able to know and understand the relation his expense account bears to his sales and gross profits.

He should subscribe to several good trade journals covering the lines that he handles so that he could keep abreast with the times and know what other successful dealers are doing. It is one of the laws of nature that everything runs in the course of least resistance, and if he does not keep himself keyed up to the highest possible pitch he will soon run down and get in a rut.

These are only a few of the good points that a retail lumber dealer should possess and to many it may sound rather theoretical, yet it is a well-known fact that the man who knows and understands his business is the man who is making a success of it, and as this is an age of specialists the lumberman or the yard manager who is going to make a success for himself and his yard must specialize in retail lumber merchandising.

Wm. Milne & Sons, of North Bay, report conditions bright for operations this season. Their mills have started cutting, and they will cut four million more from their own logs this season than they did last year. They anticipate no trouble with their own drives.



Plan of tracks and piling grounds of the Devon Lumber Company, Limited

Important Addition to Ontario Mills

Devon Lumber Company Starting Fine New Mill Near Chapleau, Ont.—Capacity 125,000 feet per Day—Description of the Plant



F. N. McRae, M.P., President.

About four miles east of Chapleau, Ont., the Devon Lumber Company, whose head office is at Ottawa, Ont., are commencing saw milling operations this year, on a large scale, at a splendid new sawmill which they have recently erected. In its equipment, shipping facilities and large stock of excellent raw material in the form of timber on the company's limits, the Devon Lumber Company have a combination which is certain to place them immediately in the front rank of Ontario lumber manufacturers. The post office address for the sawmill is Pine, Ont.

The new plant which has been designed with a view to the most economical and efficient production of lumber, has a capacity of 125,000 feet per day. The output will be white, red and jack-pine.

lumber. During the present year the company will manufacture between twelve million and thirteen million feet, mostly white pine, about six million lath and over two hundred thousand railway ties. As will be seen from the accompanying illustrations, the layout of the plant has been planned in a manner entirely in keeping with the most modern principles of sawmill practice, under the direction of I. N. Kendall, Westboro, Ont. Each element of the equipment is advantageously located and, from the entry of the logs to the exit of the finished product, every operation is carried on with the least possible expense and the greatest possible efficiency and simplicity. The equipment includes a double cutting band saw, a circular gang, which is noted for its smooth running and the uniformity of the lumber which it produces, twin circulars for making ties and slabbing, a lath and shingle mill, and all other machinery that is necessary to complete an up-to-date mill of this kind. In order to keep the plant running to full capacity, two log-jacks are provided, one for each side of the mill.

Being located on the main line of the C. P. R. at Devon Station, Ont., the company obtains a fair freight rate into all the large consuming centres in Ontario, Quebec and the Northern part of the State of New York.

The Devon Lumber Company's yard is located about three-quarters of a mile from the mill and is connected with the mill, as shown by the illustration, by the railway line. All the lumber is handled from the mill to the piling yard by locomotive and lumber lorries. The plans of the mill and yard show that the layout is one of the most up-to-date in Northern Ontario. These illustrations explain the layout better than could be done by any description.

Next winter, it is possible that the Devon Lumber Company will haul all their logs by a steam log-hauler. All their operations in the

woods are carried on under the most advanced methods and they are now enquiring into the log-hauler problem, with a view to rendering their woods operations still more efficient. Although the company started their operations last fall, about two months later than is customary, and did not cut a single log until the first day of December, they made an excellent record, putting 250,000 logs on their log dump and completing their operations by the 17th of March.

One of the half-tone illustrations shows an interesting part of the company's operations, where they are bringing their logs out, against the run of the water, over a very steep hill, by steam hoist. Another half-tone shows another method of overcoming log-hauling difficulties. It represents an extensive cut which the company made through a hog's back of land in order to connect up two spring lakes.

The president of the Devon Lumber Company is Mr. F. N. McRae, the well-known lumberman of Sherbrooke, P.Q. Mr. W. B. Bartram of Bartram Bros., Limited, Ottawa, Ont., is managing director. The other members of the company are G. F. Hodgins, Shawville, P.Q.; T. A. Low, Renfrew, Ont.; and Colin M. Bartram, of Ottawa, Ont.

Bartram Bros., Limited, Ottawa, will be the sales agents for the company. Mr. W. B. Bartram, director and general manager of the Devon Lumber Company, Limited, is also president and general manager of Bartram Bros., Limited, Ottawa, Ont., wholesale lumber dealers.

Frank N. McCrea, M.P. for Sherbrooke, P.Q., who is president of the Devon Lumber Company is one of the most widely known and successful lumbermen in the province of Quebec. He is connected with the following companies in addition to the Devon Lumber Company:—Brompton Pulp and Paper Company, East Angus, P.Q.; Sherbrooke Lumber Company; Etchemin Lumber Company and Nicolet Falls Pulp and Paper Company, in each of which he occupies the position of president. He is also vice-president of the Lotbiniere Lumber Company, Lyster, P.Q., and of the Chaudiere Lumber Company. In addition to these Mr. McCrea occupies the position of president of the Stanstead & Sherbrooke Fire Insurance Company and of the Megantic Lumber Company. Mr. McCrea was born on a farm in South Durham, P.Q. His first business venture was in the hemlock bark trade which soon led him into a connection with the timber trade, from which his business activities brought him also into touch with railway enterprises and the pulp and paper business.



W. B. Bartram, Managing Director.



Overcoming a Steep Haul by Steam Hoist—Devon Lumber Co.



Heavy Cut to Facilitate Hauling—Devon Lumber Co.

One of Mr. McCrea's largest and most successful business transactions was the acquisition of the Lotbiniere and Lake Megantic Railway and its lands from King Bros. At the time, this transaction was generally considered a risky one for Mr. McCrea, but he saw further ahead than did his friends and the outcome was a profitable one. Subsequently, Mr. McCrea purchased the assets of the Royal Pulp and Paper Company of East Angus, P.Q., and merged this undertaking and property with the Brompton Pulp and Paper Company. In public life Mr. McCrea has not only taken an active interest in Dominion politics, but also in municipal affairs. For a time he was Mayor of Durham, P.Q., and after moving to Sherbrooke was elected an alderman of that city.

Workmen's Compensation in Ontario

An Open Letter to the Legislature of the Province From a Lumber Manufacturer—Unjust Provisions Outlined

To the Legislature of Ontario: Snow Road, Ont., April 24.

Permit us to make through you, the representatives of the people of Ontario, our most earnest protest against the passage of the proposed "Meredith Workmen's Compensation Act." If we interpret its provisions correctly this enactment is one of the most unjust, iniquitous and socialistic measures that have ever been presented for the consideration of the provincial legislature in the history of the province. Inasmuch as it abolishes all common law rights, thus revolutionizing common law practice, and in its stead places in the hands of an appointed commission, **absolute and arbitrary** power without redress or appeal, making the commission the first and final arbitrator to award whatever compensation it may see fit, within certain limits, against an employer, in favor of an employee, such a law is peculiarly **dangerous** to the State. It degrades citizenship by placing dishonesty, fraud and crime at a premium, inasmuch as it imposes upon the employer the liability of paying an injured employee for life, 55 per cent. of the wages received at the time of injury, whether such injury was caused by his own carelessness, by his own wilful neglect, by purposely self-inflicted injury, or by any of these done by his associates. Should such injury result in death, the widow receives like compensation for life, or until she marries again. Our understanding is, that if two or more employees should quarrel during working hours, such quarrel resulting either in disability for life, or in death to one or more of them, the same liability would fall upon the innocent employer.

If, instead of placing this burden on the individual employer, the bill placed it on the provincial government, or better, upon the Federal or Dominion government, where all such charges properly belong, the measure would still be the direct means of causing and fostering fraud and crime on the part of our working classes, and, for this reason alone, would be against the public welfare. We do not believe that the voters of the province of Ontario, or the workmen themselves would support this bill. We have yet to learn of a workingman who favors it. Our workingmen here have sense enough to appreciate that whatever cripples their employer is against their own interests. I find, in talking with other employers in the County of Frontenac, that their men feel the same way. If we are correct in this statement why should the government vote to impose upon one class of citizens such a burden which would necessarily drive many out of business?

The act is one of the most glaring examples of class legislation ever brought before a legislative body, inasmuch as the large railways (having been built to a great extent, if not wholly, at the public expense, and who fight their employees claims to the highest courts) afford the only excuse in Canada for a workmen's compensation act. Yet these railways, among other certain classes of employers are exempted from liability by the provisions of the act.

Some employers can shift this burden upon the consumers of their product and thus raise the present high cost of living still higher, resulting in hitting hardest the working men, whom the act is intended to benefit most. Unfortunately for the lumberman, owing to strong competition from other provinces where labor is cheaper, as well as to the free trade policy of the Dominion in reference to lumber, which permits world-wide competition, he cannot shift the burden. In the lumber business particularly, such a law would work the greatest injustice and hardship and we sincerely believe that it would be the means of driving many, if not all, of the small lumber manufacturers out of business. The lumber business is not conducted in Ontario by large corporations. Its management and conduct is, as it always has been in this province, in close touch with its employees, and therefore has no need for laws which are intended to curb only large modern corporations. For this reason lumber manufacturers should be exempt from the provisions of such a bill. The same is true of a large majority of employers in all lines of industry in Ontario. In fact, scarcely any class of employers, in the province,

except the large railways affords any reason or excuse for such drastic legislation.

This bill is the result of the appointment of a one-man commission. While we have the highest regard for the legal ability of this commission, we believe better results could have been obtained by a commission consisting of two or more of the most practical business men in the province.

The definition of "manufacturer," as given in the preliminary section of the bill, is vague and indefinite, not pointing out clearly the boundary line between the different classes of employers, and, except for the arbitrary powers given the proposed commission or administrative board, would involve endless trouble, annoyance and litigation in distinguishing the proper classification of employers. In fact, it would puzzle a Philadelphia lawyer to find anyone to whom the definition of "manufacturer" will not apply. This bill is full of similar impossibilities which make it absolutely impracticable. The fact is, this measure deserves much more careful consideration than appears to have been given to it.

In our judgment, any compensation act intended to reach the employers whose past action has made such legislation at all worthy of serious consideration, should be Federal, not Provincial, for the reason that the railways and other large corporations do an inter-provincial business and are necessarily beyond the control of provincial laws. The burden of all such paternal laws **should fall on the public at large**, not on any individual, or class of individuals, not even on a single province. The principle upheld by this bill, that the burden should be lifted from the public at large and thrust upon the industry and the consumers of its product, is fundamentally wrong. The highest purpose of all good laws is to foster and encourage industry and thrift. Paternalism never encourages thrift or industry, because it affords no reward to individual effort.

This bill discourages the employment of labor by throwing unjust burdens upon the employer. It discourages thrift and effort on the part of the employee because it rewards him for getting rid of honest work by purposely disabling himself.

For all the above reasons, and many more, which would take a great deal of space to enumerate we respectfully urge that the proposed "Workmen's Compensation Bill" should not be passed.—The Chandler-Jones Lumber Company.

Keeping Tab on Car Movements

Lack of system is one of the most generally noted faults in the offices of lumbermen the extent of whose business is sufficiently great to suggest the adoption of reasonable methods of preventing errors and loss.

Cases are on record of cars being shipped out without a proper record being made and without an invoice being sent to the customer. These cases have been uncovered by accident. There are plainly many others, not located, which have been handled in this way, to the material loss of the lumber company.

If a business is small, and if the owner of it is on the job all the time, the chances of serious errors are slight; but when the concern has grown to such a point that the memory of the head of the establishment cannot contain all of its details, the opportunity for loss is considerable.

A leading wholesale hardwood concern has recently adopted a checking system for keeping tab on cars, which seems to be worth general adoption. The system is used in connection with shipments from its local yard, and also with reference to shipments from the several mills which it is operating. The plan has the advantage of simplicity, and yet seems to provide an absolute check.

The basis of the record, of course, is the tally. Turning in the tally of the inspector is followed by making out a shipping ticket, in duplicate, containing the results of the tally. These shipping tickets are numbered consecutively, consecutive numbering, in fact, being the basis of the entire system.

The sheets of the salesbook are also numbered, its numbers corresponding with those of the shipping ticket. The entry in the salesbook, in addition to containing the facts shown on the shipping ticket, likewise indicates the price at which the lumber was sold, and the books of the concern are posted from this record.

In the case of the local yard, the duplicate of the shipping ticket is not needed particularly, but where the shipment was made from a distant mill, the duplicate is kept on file at the mill for the information of the superintendent.

The bill of lading is issued in triplicate, as usual, and the car number and other information are entered in a book used for that purpose exclusively. The entries are numbered, the numbers corresponding with numbers printed on the bill of lading itself.

This is the entire system. Now let us consider how it works and what conditions it is calculated to take care of. In the first place, the use of consecutive numbers furnishes a "flag" or warning by which any lost or omitted record can be indicated. For instance, if the per-

son in charge of the salesbook notices that one number is missing, the local yard or the outside mill, as the case may be, is called on to supply the missing number.

On the other hand, the salesbook is checked against the bill of lading book, and it is determined that an entry for the salesbook; which, remember, is the basis for the ledger charges, has been made to correspond with every car shipment indicated by the bill of lading book. The use of the consecutive numbers on the latter insures the proper entry of every car, for in the event of failure to turn in the bill of lading used for this purpose, its absence is immediately noted. The use of consecutive numbers and duplicates means that a lost record will be noted, and that it can be rewritten without inconvenience.

Another feature of the bill of lading book which is worth noting is that provision is made for handling shipments which are not made in the routine way. For instance, if a car of lumber is purchased at one point, shipped to another for drying and then reshipped direct to the consignee, there is a possibility of the record being incomplete and inaccurate by reason of the tie-up at the kiln, or the suspension for any reason whatever at any other point. To take care of this, the bill of lading book, containing the car number and other information, carries a special indication that the movement is incomplete, and that a further record must be made of its final disposition. This prevents the item from being lost track of, and insures attention being called to the status of the situation.

The head of the concern which has adopted the system referred to said that the checking arrangement was not made simply because of a craze for "system," or to introduce red tape into the office. He explained that actual experience had demonstrated the need of some such protection, and that it was furnished for that reason only.

"We know of two cars which got away from us prior to the time we put this system into use," he said. "One we located because the customer wrote to make a complaint about some feature of the shipment. That called attention to the omission of the record and enabled us to get trace of it. In another case the customer was simply honest enough to call our attention to the fact that no invoice had been sent, enabling us to make an investigation and determine the car which had escaped the proper record."

"Take the bill of lading question, for example. No car is shipped without a bill of lading being made out, of course; but when unnumbered pads are used, it frequently happens, or at least can easily happen, that in case of a 'jam' in the office, someone will hurriedly make out the bill without referring it to the proper party for entry. The result is that the car is sent on with no record behind it. This cannot happen under our system. Then again, tally-sheets may become lost and no salesbook record be made. In that event the entry in the bill of lading book gives us the clue and enables us to ascertain the information we need."

"It might be supposed that the introduction of a system of this kind has been accompanied by an increase of work. On the other hand we have found that in most cases it has cut down the amount of labor required. Heretofore frequent copying, by hand, was necessary to have the proper records made. Now, with a loose-leaf system installed, the facts can be written on the typewriter, copies made at the same operation, and time and labor saved. It must be remembered that the smaller the number of clerical operations, the fewer the chances for mistakes of that kind to be made."

Another feature in connection with the checking operation is keeping tab on wagon business. In the big wholesale yard or sawmill, where carload business is the principal item, wagon hauls are likely to be overlooked if close attention is not given them. Even in retail yards, where wagon business is the only kind of trade handled, it is well-known that unless a systematic method of checking this business is provided for, wagons will get out without being recorded and the lumbermen will be able to make no charge.

For this reason it is desirable that the same sort of record, in general, be used for wagon-load hauls as for carload movements. That is to say, a ticket, in triplicate, with consecutive numbers appearing, should be used. The yard office man of course keeps one of the tickets; one is sent to the customer with the wagon, and the other goes to the office. Here again the simplicity of the scheme and the fact that the tickets are consecutively numbered operates to call attention to an omission.

It is possible, of course, for a careless driver to leave without thinking to get the ticket, or for a careless clerk to wait until all of the loads intended for a certain customer are sent out, before making up the tickets; but if the concern insists on every wagon being ticketed, and if the customers become accustomed to receiving a ticket for each load—an arrangement which is a protection to them as well as to the seller—arrangement will soon become a matter of routine to everybody in the yard, and will be taken care of accordingly. The systems referred to have been designed for the purpose of preventing innocent mistakes, but would also serve as a check on dishonest employees.—G. D. C., Jr., in *Hardwood Record*.

Dimension Stock Essentials

There are about the same number of essential factors to be considered by the man who would succeed in the dimension stock business as in any other special line of woodworking. To succeed best he should show due regard for all of them. It is not the purpose of this paper to go into details relative to all of these features but there are a few things that may be overlooked because they do not appear to be essentials, and it is hoped to draw the dimension man's attention to such points.

A prime essential in the dimension business is smooth work with the machines to the end that the stock may present the appearance of quality. If the stock is cut roughly, thick in some spots, thin in others, and with corners out of square, it will not appeal to the buyer even though it be cut from the best of timber. This means that the very appearance of the stock through careless manufacture may detract enough from its value to spoil the chances for profit in the business.

It is an undeniable fact that appearance counts for a great deal even in lumber, and the more lumber is cut into special sizes the more opportunities there are to make or mar good appearances. Rip saws should be as carefully filed and set as for doing cabinet work, so that instead of ugly saw marks that must be planed out, there will be a clean surface that a very little cut with a planer will make smooth. Saws kept in excellent condition will do enough more work to pay for the extra pains taken with them.

The band rip saw is a good machine to use in a dimension plant. Usually more pains are taken to keep it in order—it just naturally begets a higher order of mechanical skill—and besides it takes out less in kerf. It might appear that this does not amount to much in ripping up lumber and flitches, but by just a little figuring the dimension man will find that there is as much saving of kerf timber with thin saws in dimension work as there is in sawmilling. He should talk with the band saw people; they will give him the figures and the argument on this point. And then, whether he is using band or circular rip saws, he should see that they cut smoothly. It will pay, and it may mean the turning of the balance for or against success.

Another thing; when an order for dimension stock is received it should be filled exactly according to specifications. While this injunction is being given there comes to mind a pertinent instance. A millman had an order for chair-rung stock of a certain size and length. He cut it to size, but concluded that any multiple of the length would be satisfactory. So some was exact length, some double, some even four lengths. When the purchaser received it he deducted from the invoice so much per thousand for cross-cutting those of multiple lengths, and also some for trimming to exact length part of the stock that was cut single with too much spare length left on the ends for the stock to work in his lathes without equalizing.

The millman put in a complaint but the purchaser said that he would rather have paid the straight invoice and had the stock according to specifications. There is no need to dwell on the fact that it cost that millman more in prestige than was involved in dollars and cents in this one deal. Dimension stock is a different product from lumber, a product in which specifications must be followed carefully in detail if one would succeed in its manufacture. It is a business of details. The dimension manufacturer exists because he will take over and work out details which the user would otherwise have to work out for himself. If he fails to work them out correctly the consumer naturally fails to see why he should continue to buy stock from that particular dimension mill. The man who will make a pronounced success at dimension stock manufacture is he who glories in the working out of details and in seeing that his machines do the finest kind of work, for these are among the important items of the business though they may be overlooked in a general consideration of essential factors.—*Hardwood Record*.

Low Water in Central Ontario

A report from Lindsay, Ont., says:—The reports that the prices of lumber will drop this season, do not fit in very well with conditions such as local companies and others are facing at the present time. While the winter was an excellent one for the men in the woods, there is a scarcity of water, due to the fact of the great volume getting away this spring with a rush, leaving the smaller channels on which the lumbermen depend so much, with very little water. Then again, the fires in the north country last fall destroyed some important dams, in consequence of which reservoirs are almost entirely dry. The outlook at the present time is doubtful, and the chief hope is that copious falls of rain will relieve the situation.

Hon. W. R. Ross, Minister of Lands for British Columbia, has given his approval to a recommendation of the Chief Forester, Mr. H. R. MacMillan, for the expenditure of approximately \$30,000 to improve the forest fire fighting facilities of the Department. The money will be spent upon roads, trails and telephone lines in several of the important districts of the province.

Outline of a System which Enables the Manufacturer to Know the Cost of his Product—Factory Routine

A MOST important matter in connection with any manufacturing business is the estimating of the cost of the article produced. Even the all-important sales department occupies a secondary position to that of the cost accounting department. It is of no avail to find customers for the product of a plant unless one is certain that the price for which it is being sold includes, not only the cost of production, but also sufficient to cover all incidentals which may not be considered as entering directly into its cost, and furthermore, a profit sufficient to make it worth while for the company to continue in business. Cost accounting has recently become a very minute science and it is possible to-day to figure out and apportion scientifically all the details of cost which are essential

Accuracy is essential with any system for ascertaining the exact amount of time consumed in working on various orders and for learning the correct quantities of raw material which have been used, together with their proper prices and the proportion of expense which is incurred in providing them. These are the most important features to be considered in establishing a reliable system of cost accounting. Many companies have tried to follow these features in a careless or partial manner with the inevitable result of failure and confusion. If one attempted to describe the reasons leading to failure of this nature, he would have to write

enough to fill an encyclopedia. Probably the most important feature of a successful system is its simplicity, a feature which must characterize it throughout all its details. Complication of any kind must be avoided at every turn. Beginning with the employees, a limited amount of responsibility should be placed upon each man who has anything whatever to do with the recording of the time occupied or the material consumed in the completion of a job. Each job must have its order-number which is recorded on the time sheets of the men who are working upon it, and also upon the requisitions for the raw material from which it is to be made. The natural and effective method of attending to this is to be careful that a mark or punch showing the order-number is placed upon the time sheet when the job is given out. The responsibility for making this mark or punch may be

[illegible]

to any manufacturing business. In the woodworking business, cost accounting, while intricate and varied, is of very great importance and can be systematized in such a manner as to give a company complete knowledge, not only of the costs of production, but of the efficiency of machinery, departments and of every individual on the staff.

A woodworking business, like many other lines of production, is a large manufacturing enterprise with several departments more or less connected or related to one another, and is necessarily at the mercy of competitors, employees and the public. At first glance, it would seem a matter of great difficulty, almost an impossibility to inaugurate a reliable system, which will show the profits on the vari-

* First of a series of articles dealing with the problem of cost accounting in detail. Written specially for the Canada Lumberman.

DAILY TIME SHEET	
Location No.	Order No.

FEB 16 1914

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Department **D**
 Regular Location No. **141** Clock No. **207**
 Name **J. Brownlow**

Entered according to Act of Parliament of Canada in the year 1911 by
 J. Howe Jr. at the Department of Agriculture.

Form 2.—Employee's Time Sheet.

COST CARD				F.O.No. 1429	
Charge to <i>J. Brownlow</i>		STICKER			
Job <i>Music Stand</i>		MACHINE			
Class <i>Petty</i>		CLAMPS			
GAIN 17%	PRICE	4.50	BENCH		1 12
LOSS —%	COST	3.89	PAINT SHOP		30
		OUT SIDE			
SUMMARY		LABOR & EXPENSE			1 42
LABOR & EXPENSE		1 42	15' Oak	12	1 80
MATERIAL		1 80			
TRANSPORT		35			
SUB - LET					
PRIME COST		3 57			
OVERHEAD 9%		32			
THE COST.		3 89	LUMBER & STORE,		1 80

[illegible]

Form 4.—Back of Cost Card.

placed upon the foreman or operator according to conditions which prevail at the plant. It is important to bear in mind the necessity for relieving the operator of all unnecessary clerical work. With this object in view, one should cut out all red-tape, such as requiring the men to write out a number of minute particulars, which in the end are worthless. The "location number" on the time sheet, indicating just where the man worked is amply sufficient for reference, if one desires to learn just what the operator is employed upon or has been doing.

No work should be allowed to proceed in the factory without a written official numbered order, (see Form I.) originals of which should be filed in the general office and first copies in the office of the factory foreman. Following this method the foreman or clerk should give the number out with each job, that is to say, he should see that the time sheets of the men who are employed upon each job bear the same numbers as the jobs. This can best be done by placing a mark or a punch on the operator's daily time sheet when an order-number is given out, the mark or punch being placed opposite the indicated time when the work is commenced, and the number of the order placed immediately below the mark or punch. Supposing the order is No. 1429 and was given out at 8 o'clock in the morning (see time sheet Form II.) When this job has been completed (10.40 a.m. as indicated by the time sheet in Form II.), the time sheet is again punched or marked and the order-number of the next job upon which the operator works is recorded below. Following out this system makes the operator responsible for having the correct order numbers and the correct time marked upon their time sheets.

The time sheets are subsequently received by a clerk who figures the hours and minutes occupied upon a job and posts the result on the "cost cards" (see Form III.). Requisition lists are used when raw material is obtained for an order. These lists are also used by the clerk in ascertaining the various quantities of lumber and other raw materials consumed. The quantities and their rates are also posted on the cost cards.

When orders are completed the cost cards are withdrawn; the labor and raw material amounts are totalled and carried forward; the summary is totalled; the overhead percentage (which will be discussed in a later article) is added and the cost is at once ascertained.

This article has dealt in brief manner with the general factory routine of cost accounting in connection with mill work. It is proposed, in subsequent articles, to discuss the various details which come up for consideration under the following headings:—

2. Raw material: Forms—Requisitions, debit and credit system.
3. Expense: Forms.
4. Distribution: Forms—Statistics.
5. General up-keep: Forms—Statistics.

Boom Timbers for Rough Weather Towing

Montreal, March 18.—Editor Canada Lumberman; Do you, or any of your correspondents know of a boom for towing logs that will prevent their escape in the event of the tug encountering rough weather? I have heard that they tow pulp wood upon the upper lakes without loss and would like very much to have a description of the boom used.—Robert B. Ross.

Capt. E. F. Burke, of Midland, Ont., one of the best informed men in Canada upon the question of towing logs, reports that the best booms, in his opinion, for towing pulpwood or logs, are made of white pine timber, not smaller than 24 inches in diameter and as big as they can be secured. They should be from 16 to 24 ft. long, bored for 1½ in. chain, coupled about 24 inches apart and blocked all across the ends to keep the chains from cutting into the soft timber. The auger holes should be bored about 18 inches back from the end of the booms, and the chains should be just long enough to permit the booms to be coupled about 24 inches apart. In towing rafts he reports that it is necessary to have two sets of such booms around each raft. This method has been found to be more serviceable than any other kind of boom timber.

Mr. Ross states in answer to the information which was sent to him as above that he used a boom similar to the one described for a number of years, with indifferent success in rough weather. He had been informed that a cage-boom built of scantling had been used with good results in other places, and asked for further information in regard to it. Capt. Burke has been kind enough to send us further information regarding booms of this nature. These were built years ago to tow across Lake Huron, but in Capt. Burke's opinion were not serviceable. One objection to them was the fact that they were towed with a single set of chains, and if a chain parted the raft was split. In round booms such as are now used in Northern Ontario, two sets are used, and if a chain parts there is still one remaining to rely upon. Two sets of patent booms could not be used because they would pound to pieces in rough weather. Another objection was that in using patent booms for towing small timber, small logs would get in between the frame work and cause trouble and expense in poking them out. Moreover, if a boom of this nature should go ashore it would

probably be ruined. The patent booms also drew twice as much water as the round booms and were very heavy to tow.

Sometimes these patent booms were known as "fence booms." They were made about 35 ft. long, and consisted of a frame work of four pieces of 10 in. x 10 in. Norway bolted to the four sides of two end pieces 24 in. square and 6 ft. long. A third piece 24 in. square and 3 ft. long was used in the centre, the frame work being bolted to it in the same manner as to the end pieces. The bolts used were 1¼ in. Such a boom would not only be very heavy, but very expensive. The separate parts of the boom were held together by chains which permitted them to float at a distance of 2 ft. from each other.

Further information upon this subject is invited from readers of the Canada Lumberman. If anyone can furnish information which would be of assistance, we will be very pleased to forward it.

Hope to Capture the Eastern Trade

B. C. Lumbermen Planning Active Campaign for Taking Advantage of Low Freight Rates via Panama Canal

British Columbia lumbermen hoping to invade the New York market and that of Buenos Aires are looking forward to the pageant parade to be held at Vancouver, on June 12 as a means of bringing their lumber and timber to the attention of the Atlantic Coast and South American buyers. Mr. Harry G. Hayes, who has been appointed by the lumbermen to take charge of their parade at the time of the pageant, pointed out recently that following the opening of the Panama Canal there was no reason why British Columbia should not capture a large share of the lumber trade of the East Coast. At the present time, Washington mills competing against the southern yellow pine interests, manage to dispose of a large quantity of Douglas fir every year on the Atlantic coast, selling both in New York and Buenos Aires by cargo as well as shipping overland by car to points in the Eastern States. Although at the present time the British Columbia mills do practically no cargo shipping at all to the East Coast and sell comparatively few carloads to the Eastern American towns, Mr. Hayes believes that as soon as the canal is opened for commercial business the mill owners of this province will be placed in a splendid strategical position from a trade point of view.

British bottoms are cheaper on charter than American boats, he points out, and Seattle and Tacoma can not, under American maritime regulations, use British bottoms for cargo shipments to New York. This will mean that Vancouver can ship cargoes to New York cheaper than Washington cities will be able to do through the canal. This relative cost advantage applies even at the present time, around the Horn. He claims, further, that although the cost of lumber production is somewhat higher in British Columbia than in Washington, the difference is not by any means so great as has been supposed and in fact some of the British Columbia mills are producing just as cheaply as any of those across the line. The Panama Canal will have the effect, he believes, of cutting the cost of transportation to the Atlantic Coast by about sixty per cent., thus helping out all the Douglas fir shippers in their fight for the market against the yellow pine shippers of the Southern States. The net result will be, he points out, that both British Columbia and Washington shippers will be aided by cheaper transportation, and through their ability to use British bottoms the lumbermen of this province will have an extra advantage over their fellow shippers of Douglas fir in Washington State.

The opportunity for British Columbia lumbermen to seize the Atlantic coast markets, both in North and South America is here," he said. "Realizing the advantages which they can obtain in a publicity way, many mill men of the city propose to bring the lumber resources of the province to the attention of the buying public just as prominently as possible. It is planned to make the lumber parade for the pageant the most pretentious affair that ever took place in the city. It will probably be from three to four miles long. Moving picture companies are now preparing to take views of the parade, and by means of these, through newspaper reports of the affair, and also through the reports which the Ad Men will send home from their convention at the same time, our lumbermen look forward to a great deal of beneficial publicity in the east, which will no doubt lead to the building up of a large future cargo business on the east coast.

"Much of the success achieved by the Washington mills came by reason of the advertising they obtained through the monster parades held in Tacoma and Seattle a few years ago. The Seattle parade at the time of the A. Y. P. fair there was seven miles long. Moving pictures of it were shown all over the United States." Efforts are being made to have every mill in or near Vancouver well represented in the lumbermen's pageant parade. There will be many special floats typical of the various phases of the industry.

Mistletoe thrives on the western coast to an extent not approached in the east. In many places this parasitic growth is responsible, directly or indirectly, for a considerable loss of timber.



Twenty-five Thousand Pieces Ready for the Drive—Muskoka Wood Manufacturing Company, Ltd., Huntsville, Ont.

Interesting Northern Ontario Log Dumps

Reports from many of the lumber manufacturing companies of Northern Ontario indicate that the past winter was an excellent one for taking out logs in the woods. Whether all these logs will come down to the mills during the drives is another matter. The accompanying illustrations indicate the truth of the reports about the quantity of logs taken out. They represent a couple of log dumps belonging to the Muskoka Wood Manufacturing Company, Limited, Huntsville, Ont.

One of the illustrations is of a river scene on Marys River. The log dump contains 25,000 pieces. These logs are piled fully 100 feet high and an idea of the height may be obtained by the comparative height of the men who are working on top of the dump. They are so small that it is with difficulty that they can be made out. They appear merely as small black specks against the background of trees, just to the right of the group of white birch trees near the centre of the picture. The operations in connection with this dump were in charge of foreman James Lamb.

The other illustration shows a dump on Black Creek, where 28,000 pieces were dumped on the shores and in the Creek under the direction of foreman William Edgerton. Only a section of this dump is shown in the illustration. In all, it extends over a distance of a mile and a quarter.

A third log dump, of which we are unfortunately not able to show a good illustration, was in charge of foreman William Bonser. It was located on Axe Lake and contained 35,000 pieces. This dump was in circular form.

The logs in these three dumps are largely hemlock, spruce and pine. The company's hardwood is dumped on the lake shores adjacent to Huntsville.

During the sawing season of 1914, the Muskoka Wood Manufacturing Company expect to cut about four million feet of hemlock, two million feet of birch and other hardwoods and one million feet of spruce and pine. Most of the hardwood will be manufactured into "Red Deer Brand" hardwood flooring at the company's mill at Huntsville.

The Forest Products Exposition

The Forest Products Exposition which opened at Chicago on April 30th is a most important event for the lumbering industry in

America. The manager, Mr. Geo. S. Wood, in a recent official announcement, stated that during the last few weeks, previous to the opening, the interest taken by the lumber industry, and by the public in general, had greatly increased, and that co-operation had been promised by many bodies of wholesale lumber dealers and manufacturers in cities which had not hitherto been represented. Among these he mentioned many United States cities and Toronto and Ottawa. The indications then were, that the pressure for space by exhibitors would be very great during the last few days before the opening. Many important trade conventions are to be held during the exposition both at Chicago, and at New York, where the exposition will open on May 21st.

Opening New District on South Fork of Fraser

Eighty thousand acres of land, adjacent to the G. T. P. Railway in British Columbia, will be opened to pre-emption in the valley of the south fork of the Fraser River in June, according to an announcement made by Hon. William R. Ross, minister of lands. The main industry of a great part of the valley, other than farming, will be lumbering, and this should reach considerable proportions. There is a large amount of good timber, and the lumber mills built to handle it, together with the towns along the railroad between Fort George and Mount Robson Park should prove a ready market for farm produce from the district. A large mill with maximum daily capacity of 100,000 feet has been built by the Upper Fraser River Mills Company at mile 142, near Dome Creek. A pamphlet descriptive of the district, with special maps showing the various lots which will be available for pre-emption in the valley in June, is now being prepared and will shortly be issued by the department of lands.

Serious charges were recently made in the New Brunswick Legislature by L. A. Dugal, a member of the Legislature, against Hon. J. K. Fleming, the Premier of the province, who was also Minister of Lands and Mines. The charges were to the effect that the Premier had been a party to the extortion of about \$100,000 from the lessees of provincial timber lands, of which amount no account had been given nor any return made to the revenue of the province. The details of the charge are to the effect that, in addition to the increased bonus provided for by an act of the Legislature passed dur-



Twenty-eight Thousand Pieces Ready for the Drive—Muskoka Wood Manufacturing Company, Ltd., Huntsville, Ont.

ing the last session, every operator had been obliged to pay \$15 a square mile, through the agency of W. H. Berry, superintendent of scalers, and under the direction of the Premier himself. Shortly after the presentation of the charges in the House, the Premier resigned and arrangements were made for an immediate investigation.

Quebec Forbids Rough Lumber Exports from Railway Lands

The Quebec Government, through the Department of Crown Lands, has (says a despatch from Quebec) taken steps to prevent the wholesale exportation of lumber to foreign countries by corporations who have been granted timberlands as subsidies by the Government. Article 13 of the Woods and Forests Regulations, passed by Order-in-Council in April, 1910, will apply for all Crown lands given as subsidies to railway companies. "The timber in such lands must be manufactured in Canada: that is to say, converted into pulp or paper, deals or boards, or into any article of trade or merchandise of which the said timber is only the raw material." The timber, properly squared or made into ties, will be considered as manufactured, but roughly trimmed lumber will not.

Pushing Canadian Shingles

A report from Kansas City, Mo., published by a United States lumber trade journal, says: The Chicago Lumber and Coal Company is pushing Canadian red cedar shingles. The company began working with the Canadian product about two weeks ago and their success has been so great that they can't talk about anything except Canadian shingles. The Canadian shingles come from British Columbia. They are upright shingles and grade 100 per cent. clear, the company say. They are 4 inches and wider, and guaranteed full thickness. The Canadian shingles are quoted twenty cents higher than the ordinary shingles, but they are going in good shape at the higher figure.

Overhead Carrier for Lumber Shed

An overhead carrier system in connection with a retail lumber shed may be used to much advantage as shown by a description of one installed by a correspondent of the American Lumberman. Their shed, he says, is built with the driveways at right angles to the railway tracks which are adjacent to the back end of the shed. The shed is of the double-deck type, with the roof sufficiently high to enable us to support the carrier track from the roof, which we have timbered up to carry the load. The runways on each side of the driveways at second deck are also built sufficiently strong to carry the load after the carrier has been released. At the end of the shed next to the track we have a large door opening on a level with the car doors, and just inside the shed on the same level we have a platform upon which we rest the carrier while being loaded, the lumber passing directly from the car to the carrier.

We used an enclosed track, with 16-wheel trolley carrier. To this we attached a triplex chain block of two-ton capacity, with sufficient length of lift to cover the distance from the first to the second deck. Attached to this block we have a car built of 4 x 6 timbers for sills and top carrier beam, with 4 x 4 frame work. To maintain the rigidity of the framework of the car a road is run over each arch with a nut on each end underneath the sills. At the outer end of the car we use a bale, similar in operation to a bucket bale. This bale may be released at top of carrier beam and will fall down so that the car may be removed from load, after which the bale may be replaced and fastened with the automatic fastener on end of carrier beam.

It is extremely important that the principle employed in the construction of this car be adhered to, else the load will not balance, and trouble will be experienced. The framework at the end of the car is simply to hold the car rigid when the end bale or support is released. The two point suspension is to overcome the tendency to tip when the load is out of balance. The weight of a man standing on the end of the load does not affect the balance perceptibly. If one point suspension were used this unequal weight would result in the spilling of the load.

In operation the load is carried down the track endwise to a point opposite the bin in which you desire to place it, the load is then turned around with the end toward the bin, and the load left to rest on a pair of wooden trestles if on the lower deck, or upon the runways if on the upper deck, where it may be placed in the bin with the least possible expenditure of energy and time, while the carrier car goes back to the car to be reloaded.

The convenience and efficiency of this device are its strong points. By its use it enables three men to do the work of four men and two teams in the old way, and has the added advantage of filling the upper deck as conveniently and as cheaply as the lower deck. This feature alone is an item to be appreciated in the construction of a lumber shed.

Getting Prompt Payment

It is a principle of law and a conclusion which your books will prove, that sales are not completed until payment is received.

When you invest your capital by extending credit and it is not returned at the time agreed, your cost is increased and your profit reduced.

In these days of strenuous competition, it is up to the dealer to secure prompt return of his capital, re-invest it in new goods, and thus keep up the volume of sales.

Have definite terms. First, be sure that your customer understands them. Second, enforce them. If they were agreed to at time of purchase, they were plainly satisfactory then and you have every reason to insist that they be respected. Unless the customer convinces you that he is fully warranted in asking additional time, insist that he live up to his promise to pay on the due date.

A dealer can readily train his patrons into one of two habits—the habit of prompt pay or the habit of delinquency.

It may be impossible to bring about immediately a strict compliance with terms. You can't make a sudden jump, but you can follow a policy of swinging your old customers into line and of seeing to it that your new patrons have the right attitude from the start.—Goodyear No-Rim-Cut News.

Fundamentals of Success

There are a number of fundamental features necessary for the successful operation of a retail lumber yard.

One of the essentials is a demand for lumber in the locality where the yard is located.

Another is the selection of a stock suitable to the needs of the community.

An important consideration is a well-kept yard, uppers protected from the weather, good foundations, planked gangways and the yard throughout kept free from refuse.

Also a system of accounting whereby a balance sheet showing the true condition of the business may be drawn off at any time.

The items enumerated are those that will naturally occur to the average dealer, are necessarily routine matters, and when once established may be continued for an indefinite period.

Salesmanship or securing business on other than general lines is a question that would require a study of local conditions to outline correctly, however, any plan adopted would demand aggressiveness as the principle characteristic.

There are many men who possess the knowledge, ability and energy to organize, manage and direct the purchasing, maintenance of stock and an accounting system in connection with a lumber yard.

Likewise they can sell lumber at some kind of price, but it often happens that the price is more beneficial to the buyer than to the seller.

As the profit received from the investment of one's capital and effort is the incentive for maintaining or following any mercantile pursuit, it is quite within the limits of reason to assume that the fundamental feature of the greatest importance in the lumber business, is a selling price that will be productive of a fair margin of profit.

The dealer who knows to a certainty what it costs him to do business is in a position to state positively the prices at which he can sell; prices that will be fair to the purchaser and still leave him a legitimate return from the transaction.

Should he happen to be the only dealer in his locality, he will have only his own affairs to consider and equitable dealing on the lines specified will quite likely keep his customers satisfied.

Should there be two or more dealers in the same locality and one or more of them is not properly posted regarding the detail and costs of operation, there may be a variation in selling prices.

The dealer who is not posted regarding costs, may, from inability rather than wrong intent, make rates so low that they will be unproductive of profit.

In such a case it is quite within the province of business acumen or plain "horse sense" for the dealer who knows to point out to him the error of his ways and aid him in taking a post-graduate course in establishing selling prices that will enable him thereafter to play the game in accordance with the opinion held by all fair-minded men, which is, "the laborer is worthy of his hire," or the old adage about not muzzling the ox that treads out the grain.

Instructing a brother lumber dealer in a method whereby he may know the right price to charge for his wares is not a menace to the public interests.

On the contrary it is a benefit, as it enables him to do business on right and equitable lines, thereby insuring a profit on his transactions, likewise induces him to join the constantly increasing throng of merchants who are willing and anxious to accord the same privilege to others. G. A. B. in The Pioneer Western Lumberman.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 7-tf

Wanted For Factory Use

One-inch Black Ash and Basswood. State your lowest price and grades, together with full particulars. Box 13, Canada Lumberman, Toronto. 9

Shavings and Sawdust

Wanted to buy. Would prefer shavings baled and separate from the sawdust. Quote prices at your station.

M. BRENNEN & SONS,
Hamilton, Ont.

7-12

Wanted to Buy

One million feet 1-in. Dead Cull Pine, also fifty thousand feet 1-in. Cull Spruce or Hemlock. Apply

M. BRENNEN & SONS,
Hamilton, Ont.

6-9

Wanted

Soft Elm, 4/4 log run.
Birch, 5/4 log run.
Quote lowest prices F.O.B. mill for dry or new cut.

E. M. NICHOLSON,
Board of Trade Building,
Montreal, Que.

9-t.f.

Wanted To Buy—1000 Birch Logs

fresh, clean, straight and sound, 14-in. and up diameter at small end, 8 ft. to 16 ft. long. Delivery to commence as soon as possible. Terms: 75 per cent. cash when alongside track at railway station, balance when loaded on cars. Write P. O. Box No. 1595, Montreal, stating best price. t.f.

Wanted to Buy

250,000 ft. 4/4 No. 1 C. & B. Basswood, winter sawed.
Ten cars 4/4 x 12-in. and up Soft Elm.
One car 4/4, 6/4 and 8/4 1s and 2s Soft Elm.
Box 998, Canada Lumberman, Toronto 7-10

For Sale-Lumber

Hard Maple and Hemlock

We have half a million feet hard maple and half a million hemlock. Can cut dimension stock. Write best offer.

Trenton Cooperaage Mills Limited,
Trenton, Ont.

7-10

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft.
P. O. Box 392, Ottawa, Ont. 3-t.f.

For Sale

Cedar squares, ties, telephone poles, 8 ft. posts, all sizes.
1 car of 1-in. Soft Maple, dry.

HERBERT H. WISE,
Freelton, Ont.

9

For Sale

2500 Cedar Poles, 25 to 50 ft. long.
Apply to

MAGEAN & COUSINEAU,
Sturgeon Falls, Ont.

9

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

c

For Sale

In car lots only:

8/4 Soft Elm.
4/4 Soft Elm Culls.
4/4 Soft Elm, No. 1 C. & B.
4/4 Soft Maple, No. 2 C. & B.

The above lumber is well manufactured and bone dry. Box 15, Canada Lumberman, Toronto, Ont. 9

For Sale

2 cars 3 x 4 to 7-in. Sound Maple Hearts.
2 cars 4 1/4 x 5 1/2 Sound Boxed Maple Hearts
1 car 2 1/2 in. Soft Elm, No. 1 C. & B.
1 car 2-in. Birch, No. 2 C. & B.
4 cars 1 1/2-in. Beech, No. 2 C. & B.
5 cars 1 3/4 in. Maple, No. 2 C. & B.

Dry stock. Immediate shipment.

Pedwell Hardwood Lumber Co.,
6 St. Ann's Road,
Toronto, Ont.

9-t.f.

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,
Janesville, Wisconsin.

1-t.f.

For Sale-Machinery

Engine For Sale

15-in. x 34-in. single cylinder Wheelock, left hand with pulley and flywheel. In the very best condition. Can be seen in operation.

The Steel Company of Canada, Limited,
Montreal, Que.

9

Second Hand Machinery

150 to 175 h.p. Corliss Engine, 16-in. x 36-in., new two years ago.
75 to 100 h.p. Brown Automatic, 13-in. x 30-in., in excellent condition.
500 to 750 h.p. Buckeye; a good sawmill engine.
Boilers, 72-in. x 18-ft. and 54-in. x 14-ft.

THOMAS HOBBS,
Mail Building,
Toronto, Ont.

7-t.f.

Woodworking Machinery For Sale: 1 40-in. MacGregor-Gourlay bandsaw; 1 42-in. Fay & Egan power feed band rip saw; 6 Ideal variety saw tables; 2 24-in. Champion planers, matchers and moulders; 1 2 1/2-in. Waymoth variety wood turning lathe; 1 Hespeler improved power mortiser; 1 36-in. Egan double drum sander. H. W. Petrie, Limited, Toronto, Ont. 9

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted as sawyer. Circular, single or double cut band saw. Box 306, Parry Sound, Ont. 8-10

EXPERIENCED LUMBER INSPECTOR wants position. Address Box 986, Canada Lumberman, Toronto. 6-9

Single cut band or circular sawyer open for engagement. Best references. W. Gariefny, Box 49, Chandler, Gaspe Co., Que. 9-10

Position wanted as band saw filer, double or single cut, or in a factory where there are hand re-saws. First-class references. Address Box 972, Canada Lumberman, Toronto. 9

COST CLERK desires position with a woodworking concern. Ability to organize. Practical and experienced. Best of references. Box 980, Canada Lumberman, Toronto. 9-10

Saw filer, band or circular, wants position, 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 9-12

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

WANTED—Lumber Traveller for Ontario. Would prefer young man with experience. Reply confidential. Box 5, Canada Lumberman, Toronto. 8-11

WANTED—A setter for Band Mill. Want big, strong man able to do all the setting. Cutting principally spruce and pine, making mostly 4, 5 and 6 in. cants for resaw. State experience. Good wages for right man. The J. B. Snowball Company, Limited, Chatham, N.B. 9

Business Chances

For Rent

Second storey, Planing factory, 80 by 100 feet. 10 Machines. Power supplied.

GUELPH LUMBER CO.,
Guelph, Ont.

9

For Sale—Retail Lumber Yard and

Planing mill, \$5,000. Stock at invoice prices. Last year's business \$25,800. Natural gas power. Railway siding. 400 ft. metal sheds, etc. Caledonia Milling Co., Ltd., Caledonia, Ontario. 6-9

Active Partner

Wanted to join practical man now operating sawmill at Barriere, B.C., on the C. N. R. Within easy reach of Prairie markets and a plentiful supply of good lumber. Write Box 997, Canada Lumberman, Toronto. 7-9

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. 8-tf

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-tf

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-tf

Money To Invest

Thoroughly practical lumber and mill man has \$2,000 to invest in a good going lumber concern, in which he could have a responsible position. Can handle any part, logging or milling operation. Address Box 248, Woodstock, N.B. 7

British Columbia Saw Mill and Timber Limit For Sale

A 25-thousand feet capacity Saw Mill, and 90 million feet first class Spruce, Red Cedar, Hemlock and Yellow Cedar, etc., under B. C. Special License. At good shipping point near Prince Rupert, B.C. Inspection invited. A. Cuthbert, P. O. Box 456, Prince Rupert, B.C. 6-11

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

For Sale

Complete sawmill outfit, practically new; capacity 12 M. ft. hardwood. Marine boiler, 50 h.p., and Dutch oven, 40 h.p. engine. No. 4 carriage with overset lever. Cable feed. Friction canter. Double edger; cut off saw and a full complement of large and small saws and belting, including a 14-inch 2-ply leather driving belt. Frame building, iron roof.

Also Long Mfg. Co. Clipper Shingle Machine in best of condition, and outfit complete; will be sold with sawmill or separate. Mill at Angus, Ontario. Apply Frank McMullin, Barrie, Ont., who will show mill, or Chas. T. DePuy, Rochester, N.Y. 8-10



Timber Sale

Tenders will be received by the undersigned up to noon of the 6th day of July, 1914, for the right to cut the Red and White Pine timber on Berths 1 B, 1 C, and 1 D, in the Missisaga Forest Reserve tributary to the north shore of Lake Huron, each Berth containing an area of 36 square miles, more or less.

For maps and conditions of sale apply to the undersigned or the Crown Timber Agents at Thessalon, Sault Ste. Marie, Webbwood and Sudbury.

W. H. HEARST,

Minister of Lands, Forests and Mines.
Toronto, April 18th, 1914.

N.B.—No unauthorized publication of this notice will be paid for. 9-16

Miscellaneous

Saw Mill Machinery For Sale

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber T. ble, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

Captain Dollar Discusses Tolls

Captain Robert Dollar, of San Francisco, owner of the Dollar line of steamships, recently discussed the Panama Canal and the toll question as follows: "There is no doubt but that the canal will be of great benefit to the Pacific Coast but it depends upon how the toll question is settled whether the lumber industry will be greatly benefited or not. It is plain that if the free tolls act is repealed the lumber industry of the Pacific Coast States will be hard hit, as British Columbia manufacturers will be enabled to ship lumber on foreign bottoms through the canal at such low rates that American millmen cannot compete in intercoastal trade. Even if American ships are exempted, foreign bottoms still have an advantage as foreign ships are operated at lower cost. Charging American ships tolls simply means an additional barrier to domestic shipping. It seems that the lumber business gets hit at every turn and now comes the toll bugaboo and adds another thrust to the industry."

Captain Dollar said that there were no American lumber ships on the Pacific Coast large enough to make it profitable to carry lumber at long distances. He says that a ship, plying from the Pacific Coast through the canal to the North Atlantic Coast, must have a capacity of at least 5,000,000 feet in order to make a fair profit. His company is having built at Clyde, Scotland, a carrier with a capacity of between 5,000,000 and 6,000,000 feet to engage in long-distance shipping. Captain Dollar has contracted to transport 24,000,000 feet of lumber from Victoria, B.C., to New London, Conn., whence the lumber will be trans-shipped to Toronto, to be used in the construction of the government wharf works.

Export Duty on Logs

The United States Department of State has agreed to open negotiations with Canada for a trade agreement by which the shingle manufacturers of Washington will be relieved of the burden of paying the export on

shingle logs that Canada now imposes, says "The Timberman." Senator Poindexter took up the question of a removal of the duty on exportable cedar logs with Secretary of State Bryan, presenting facts concerning the differences in the value of cedar logs to the Canadian and American manufacturer. As the United States imposes no export duty on logs or an import duty on shingles entering the United States, it is only fair, he claims, that Canada should reciprocate, thus placing the manufacturers of both countries on an equal basis. Secretary Bryan has sent to Senator Poindexter the following notification, stating what the department will undertake to do in the settlement of this controversy:

"In view of the disadvantages to which the American manufacturers of shingles along the Canadian border are subjected by reason of the restrictions placed by the Canadian provinces on the export of logs, and pursuant to your request, appropriate instructions will be transmitted to our consul-general at Vancouver, B.C., to investigate the facts and, if the circumstances warrant, to take up the matter with the proper Canadian officials—with a view to secure, if possible, a removal of the restrictions, to the end that the American exporters may receive fair treatment.

"You are further advised that in any negotiations that may take place under the tariff law of October, 1913, for the conclusion of trade agreements, the subject to which your letter relates will receive due consideration."

Exposition Flag Poles

About half of the large flag poles which have been used on the exposition grounds of the Panama-Pacific Exposition are made in a specially constructed machine that is capable of turning out spars and poles up to 34 inches in diameter and 150 feet in length. About 100 85-foot flag poles have been manufactured, and over 300 electric light standards running as large as 22 inches in diameter and 60 feet long have been turned out through the use of special machinery.

Douglas Fir

The production of Douglas fir lumber has increased thirty-eight per cent. in the last two years, according to a recent publication of the Dominion Forestry Branch on the forest products of Canada. This percentage is double that of any other leading Canadian wood for the same period. This tree made up 67.7 per cent. of the total lumber production of British Columbia, which province is estimated to contain as much timber as all the rest of Canada. The importance of the Douglas fir is exemplified by a statement made

by Dr. C. S. Sargent, the leading authority on American trees, who says: "No other American tree of the first magnitude is so widely distributed, or can now afford so much timber, and the rapidity of its growth and its power of reproduction under favorable conditions make it the most valuable inhabitant of the great coniferous forest of the northwest."

Fixing Line Shafting

To fix line shafting in a direct line with an existing shaft, commence by fixing securely a wooden bracket on the wall, standard or column. Be careful to see that the top of the bracket is level, and also exactly level with the centre of the shafting. When this bracket is fixed correctly, then, with a truly parallel straight-edge, level on to where it is decided to fix the first permanent bracket; then fix another wooden bracket close to but not interfering with position of bracket, and so on, as far as may be necessary. These temporary brackets will enable you to set off the proper positions of the permanent brackets accurately, and also form an excellent guide in fixing them correctly in position. If, as is frequently the case, the line of shafting is to be hung from the beams carrying an upper floor, the method of procedure will be exactly the same as that already described, only that the temporary arrangement will take the form of a hanger instead of a bracket.

To get the parallel line, stretch a line parallel to the existing shaft for about 20 or 30 feet of its length and as near as possible to it. No doubt there will be pulleys, straps, and other obstacles in the way, but there will be no difficulty in clearing them. Continue the line the required distance, and when set truly parallel, fix it securely; then set off from it on each wooden bracket the correct centre line of shafting. When this is correctly accomplished the fixing of the permanent brackets may be proceeded with.

In order to insure accuracy and also to facilitate the final adjustment of the shafting the bracket should be kept about half an inch low. This deficit is made up by a piece of hard wood of the proper size being fitted on the bracket for the plumber block to rest on.

In laying down or erecting plant in a new concern the first thing to be done is to get in or set off a line on the floor parallel with the line of shafting, or, if this is not erected, exactly true with the projected line. This line should be traced in in some way, so that it may not be lost, as it will require to be frequently referred to. From the scale drawing of shop, set off the positions

of the foundations of each machine, which, as a matter of course, must be accurately true in every respect with centre line. It is frequently necessary to set off a square line from the centre line. This is very often got in by using a large square, but we much prefer the ordinary method of raising a perpendicular from the straight line.

In transferring a line from the floor to project a line of shafting, a centre "plumb-bob" must be made use of in conjunction with temporary wooden brackets, as above mentioned. By the methods described, countershaft, auxiliary, or any description of parallel shafting may be set off readily, but in every case we strongly advise the fixing of temporary means for readily tracing or marking the necessary lines.

To arrange the different things true with each other, the greatest care must be exercised to see that machines are set exactly level and absolutely true with the shaftings, as if not so fixed no end of trouble will arise through the belt working badly on the pulleys. For belt-gearing the shafts carrying the pulleys should be absolutely level and parallel with each other. If they are so, no difficulty can be experienced with good belting. In finally levelling the bearings for a line of shafting many erectors lay the straight-edge in the bottom of the bearing. This, for obvious reasons, is not a good plan, and the method we adopt in our own practice is to prepare a piece, or, rather, two pieces, of hard wood the diameter of the shaft, cut them to exactly the centre line, and lay them in the bearings when applying the straight-edge in levelling. — Timber Trades Journal.

BAUGHMAN'S BUYER AND SELLER

Special Price, \$1.00

Canada Lumberman - Toronto



**Montreal Engineering Co.,
Limited,
164 St. James Street,
Montreal.**

**Timber limits examined,
cruised and surveyed.
Waterpowers developed.
Pulp and Paper Mills designed and constructed.
Projects financed.**

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario continues on the same quiet basis as has prevailed for some weeks. The situation is one which is puzzling wholesalers considerably. In addition to the decrease in the demand for stocks, as compared with the corresponding period in previous years, the factor of competition is becoming much more severe. Continual changes are reported in the class of stocks which are being used by retailers, and large manufacturers who use lumber as a raw material. So great are these changes that one important wholesaler remarked to the Canada Lumberman that he was more perplexed by the condition of the market to-day than he had ever been before. Wisconsin hemlock, Tennessee hemlock and Michigan hemlock, for instance, he said, were competing successfully with hemlock from Northern Ontario, and the Ontario manufacturers, moreover, could not sell their stocks any cheaper and make any money. The whole situation, he said, was exceptionally puzzling, and he could not venture an opinion as to the direction of trade developments in the near future.

Prospects for trade throughout Ontario at present, he reported, were not good. Trade in fact is very quiet throughout the country. In the large cities and important consuming centres a fair amount of trade is in progress, although it is far short of the usual volume at the present time of year. Backward weather has had a share in bringing about these conditions, but general trade conditions seem to be the most important factor. One of the most serious results of the situation is the increasing tendency toward price-cutting, which is making it very difficult to secure trade at a profit and is causing much more harm than good. A sluggish market such as the present one, cannot be improved by price-cutting. The only result is that many firms, which are already experiencing the difficulties arising out of reduced volume of trade, are suffering to a still greater extent because of the price-cutting which reduces their margins and restricts their trade.

In spite of the fact that money became cheaper shortly after the opening of the year, collections are still a matter of great concern to the trade. Wholesalers report that they find it more difficult than usual to get their money. On the whole, the trade seems still to be uncertain about the developments of the immediate future, and to be marking time and seeking to adjust its business and financial relations in such a way as to be ready, either for better trade when it may develop, or for a continuation of quiet times, if improvement does not come soon.

Eastern Canada

Better trade is reported at Montreal. Wholesalers say that orders are being placed more freely and there is more pronounced activity throughout the trade. Shortleaf yellow pine, and the better grades of southern pine are affecting the market to some extent. Practically all prices are unchanged and firm. There is a better demand for hardwoods. Prices of lath are firm and stocks are scarce. New Brunswick shingles show a tendency towards slightly easier prices. The desire of the railway companies to increase export freight rates from Ottawa points to Montreal is causing the trade some anxiety as the market in Great Britain is slow. Ocean freight rates however, are low, being 37s. 6d. per standard, a reduction of 5s. as compared with last year.

A better demand is reported for spruce at New York and in the adjoining territory. Very little new building has been started, and the yards are going along quietly with their present supplies which seem to be ample. Indications of stronger prices are noticeable and it is thought that the worst of the situation has passed, so far as price cutting is concerned. Some improvement is also noted in spruce at Boston. Quotations of less than \$25 basis are becoming rare. It is thought that there will soon be extensive building activity which has been held back by bad weather. Better demand is reported for random. For 2 x 4 \$23 has been asked recently, although it is still possible to buy at \$22.50 and sometimes \$22. For 2 x 3, \$21.50 is being quoted, but there are still sales at \$21. For 2 x 6 and 2 x 7 the price ranges from \$20.50 to \$21, with 2 x 8 at \$22.50 and \$23. Enquiry is light for 2 x 10 and 2 x 12 and quotations are \$24 to \$24.50 and \$24.50 to \$25 respectively. The demand for hemlock boards at Boston is light and buyers are refusing to pay more than \$24. Many of the sales are going through at \$23.50.

An increasing demand is reported for lath at Boston and prices are stiffening. For 1½", which was recently selling at \$4.10, the rock bottom price is now \$4.15 and some sales are being made at \$4.20. It is even said that some merchants are asking \$4.25 and getting it.

For 1-in. lath, \$3.90 is asked, but business is still going through at \$3.75 and \$3.80. White cedar extras can be had at \$3.50 and standard brands are selling at \$3.55, with the commission off. Second clears are ranging from \$2.75 to \$2.90. Vancouver and Washington shingles are selling at Boston at \$3.75 for the best brands, while very good extras are to be had for \$3.65 and \$3.68.

Great Britain

The Board of Trade report for the month of March is very satisfactory. Both exports and imports show increased values. The chief increase in imports was in raw cotton. The total value of imports was £66,935,228, an increase of £5,592,784, over March, 1913, or 9.1 per cent. The total value of exports was £44,518,661, an increase of £2,828,714, or 6.7 per cent. For the three months ending March, the imports showed an increase of 0.3 per cent. and the exports an increase of 4.9 per cent. as compared with the first three months of 1913. Imports of hewn timber from Canada during March, 1914, totalled 1,193 loads as compared with 2,719 loads in March, 1913. The values were as follows:—March, 1914, £6,858; March, 1913, £12,004.

In spite of the satisfactory Board of Trade report, it is difficult to find anyone who is satisfied with the London spot market for wood goods. Deliveries have continued on a fairly extensive scale, but have not been sufficient to diminish the surplus stocks of deal sizes. Importers, therefore, are not showing any interest in forward buying. Export business shows a little more signs of life. Values have remained fairly steady, particularly for good stocks. It is difficult, however, to secure good prices for stock which is of doubtful grade. New Goods are expected to arrive on a somewhat lower basis of prices, on account of the reduction in freights. Deliveries at London docks for the week ending April 4th totalled 3,983 loads, as compared with 3,742 in the corresponding week of last year. At Churchill & Sims' recent auction sale, 2½-in. Quebec birch planks brought 1s 7d, and 2-in. 1s 5½d and 1s 5d.

A fair amount of business has been completed at Liverpool for cargoes for forward delivery on c.i.f. terms, and values have been well maintained. Offerings of the better class of deals do not appear to be very large. Liner parcels were still arriving, at latest reports, and apparently "no reasonable offer" was being refused. This season's liner shipments have been of a better quality than usual, yet importers have been able to secure them at much lower prices than those which have prevailed for cargoes of inferior deals and poorer specifications. The spot market at Manchester is fairly steady, the arrivals of parcels not being so extensive. It is expected that, when cargoes which have already been contracted for, commence to arrive, there will be no necessity for taking such low prices as those existing today.

Up to the end of March, imports into Manchester and Liverpool were more than half as much again as those of the corresponding period last year and were only 500 standards less than the combined consumption. Without any further arrivals there was, at latest reports, more than three months' consumption still in stock, and only one month to go before the season proper would commence. The building trade appears to be on the eve of a revival, but the improvement must become much more definite before the effect is felt in the lumber trade.

A little more improvement is reported in the Liverpool market for birch. Arrivals have been more frequent. At present, the consumption is a little greater than the arrivals can keep up with and stocks are being gradually reduced, although not to any great extent. Values remain steady, especially for logs. Heavier arrivals are expected during the next month or two.

At Glasgow, conditions remain unchanged, the volume of business continuing fair. A little more request is reported for spruce, and there has been a steady movement from stocks. The demand is best for wider sizes, but there has been an increased enquiry also for Quebec yellow pine deals and sidings are moving steadily, but not rapidly. Stocks on hand are somewhat depleted, except for sidings.

United States

Business conditions throughout the United States continue on a very perplexing basis. Inactivity seems to have spread, rather than otherwise, in spite of the fact that there is an abundant supply of cheap money and that the government crop reports have been most encouraging. A great deal of attention is being paid to the decision which will be given by the Interstate Commerce Commission upon

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

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That we saw the year round and always have large stocks of

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Headquarters for Norway Silo Stock.

the application of the railroads for a five per cent. advance in freight rates. It is believed that, if this application is granted, the railroads will gradually get back into the market. They will be certain, at least, to place orders more liberally than at present. The steel trade, although still operating on the same basis as a month ago, is receiving very few new orders.

During the last fortnight an increased demand has developed for lumber from the smaller towns. A month ago the demand was from the larger cities. This is a seasonable development, due principally to the retail trade and the factory and building requirements. Big consumers have not been making any unusual call. The dullness, so noticeable in all other branches of business, is also evident in the

lumber trade. There has been no contracting for large amounts.

The Southern pine situation is reported to be fairly encouraging. Conditions on the Pacific Coast are practically unchanged. A little better trade is reported in Northern pine, although the demand has been held up by bad roads. Shipments are about normal and there is good prospect for increased business, as crop conditions are ideal. Prices are firm and manufacturers are expected to have a shortage of possibly 30 per cent. compared with the normal output. The demand at the foot of the lakes is seasonable. The spring demand for hemlock has not yet started actively, but dry stocks are low and the outlook is regarded as promising. Eastern spruce manufacturers report that orders are more numerous. Prices are unchanged.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

Continued Improvement at Montreal

Montreal, April 27th (Special to the Canada Lumberman): The improvement in trade, noted in our last issue, has continued, despite the late opening of the season consequent on the bad weather. Wholesalers state that orders are being placed with much more freedom, and there is a decidedly optimistic feeling as to business in the immediate future. Some firms, however, view with dissatisfaction the continued dumping of short-leaf southern pine in Canada, at prices which have a tendency to depress quotations for pine lumber. It is also stated that, lately, some of the better grades of southern pine have been coming more freely into the Montreal market. Quotations for practically all descriptions of lumber keep firm.

Hardwoods generally are in better request. Lath is very scarce and stiff in price, but New Brunswick shingles, extras and clears, are inclined to ease off.

Exporters are complaining of the attempt of the railway companies to increase freight rates from Ottawa points. Orders in Great Britain have been booked on the basis of the present schedule, and in the event of the new rates being confirmed by the Railway Commission, losses of from \$3.40 to \$5 per car will have to be borne. Those might have been avoided had the companies given notice at the end of last season instead of at the commencement of the present one. The present outlook is adverse to any heavy export business, the demand for Canadian lumber in Great Britain being slow. One good feature is a reduction in ocean freights, the steamship companies charging 37s. 6d. per standard against 42s. 6d. last year, when rates were raised to the extent of 5s. now taken off. The reason for the reduction is the anticipated scarcity of cargoes.

Ground wood is a quiet market, owing to the excellent water conditions in the United States. This will probably continue for another four or five weeks, after which it is expected there will be some heavy orders placed with the Canadian mills. Prospects are that the consumption of ground wood pulp will increase considerably this year.

Chemical pulp is a strong market. The manufacturers of kraft are shipping very heavily.

The trouble in Mexico will make for larger orders for newsprint from the United States. The previous war, in which the United States were engaged, increased the use of paper by 30 per cent.

Ottawa Operations Retarded by Ice

Ottawa, April 21, (Special to the Canada Lumberman).—It was expected that the sawmills along the rivers in this district would have begun operations by this time, but the ice is still fairly thick in many places and until it breaks up, operations will have to be held up. In some parts of the Ottawa Valley, especially at Lake Deschenes, an expansion of the river, the ice is still strong enough in some places to support a team of horses.

Trade generally is not very brisk. There is a noticeable absence of any movement in speculative building even though Ottawa, like Montreal and Toronto, is badly in need of small houses. The country has not yet recovered from the financial stress that has been so marked lately; and no very radical change is looked for until the result of this year's crop is known. No changes in prices worthy of mention have taken place recently.

There has been considerably more timber cut in the woods during the past winter than for several previous seasons, and most of it has already been sold. Prices have remained steady and no advances are expected for some time; at least not while the market continues in its present condition.

Whether wood blocks are better for street paving than asphalt is again causing considerable discussion amongst civic officials in

Ottawa as several contracts for spring paving are about to be let. There is a marked disposition in some quarters to try out the wood blocks more extensively, since they have proved satisfactory on the Plaza and the new Bank street bridge.

Senator W. C. Edwards, head of the lumber firm that bears his name, made application today to the Private Bills Committee, of the House of Commons, to secure the legal right to dispose of surplus hydro-electric power which he is developing at his plant at the little Chaudiere Falls. The Commission had been consulted.

It is understood that W. C. Edwards Company have for some time been generating electric power for their own plant and now finding they have a little surplus, desire to dispose of it at reasonable rates. As for competing with the Hydro-electric, Senator Edwards says the idea is absurd. He explains that he is president of the Ottawa and Hull Power Company, from which concern the Hydro-electric Commission buys most of the power it supplies to the people of Ottawa through the Ottawa Municipal Electric Commission, which operates under the jurisdiction of the Hydro.

A good deal of talk is being indulged in both in Great Britain and Canada to the effect that Hon. George Perley will be appointed successor to the late Lord Strathcona, as High Commissioner for Canada. It is said that his appointment to this high office is practically assured. Incidentally Mr. Perley is a native of the United States, having been born at Lebanon, N.H., and one of the best known lumbermen in Canada. He took over his father's extensive interests on the death of the latter and became a partner in the firm of Perley and Pattee. Mr. Perley is now identified with the Riordon Pulp and Paper Company, of Hawkesbury, Ont.

St. John River Clear of Ice

A despatch from St. John, N.B., under date of April 21st, says:—

The St. John River is clear of solid ice this afternoon the entire distance from Grand Falls down to Bear Island, about 22 miles above Fredericton. The ice has been running as far down as the head of Mactaquac Island, 14 miles above this city. A tremendous jam has formed there and extended at noon today as far up river as Bear Island. The big jam is already eight miles long and the tremendous pressure of ice running the entire length of the river as far as Grand Falls with a heavy current behind it is expected to cause the ice on the lower river to make a move at an earlier date than expected. Those who keep close tab on the water and ice at this season of the year were surprised this morning when word reached here that the ice had been running throughout the night from Grand Falls down to such a short distance above Fredericton. The St. John River Log Driving Company's officials were taken completely unawares.

Arthur V. Rowan, manager of the corporation drive, reported that the preparations for handling the early run of logs were about completed and the company were ready to hang their booms just as soon as the ice moved out.

Liverpool Requiring Only Moderate Shipments

The United States Daily Consular & Trade Report in a recent issue contained the following reference to the timber trade at Liverpool, England, and other Mersey ports during 1913:—"The tonnage employed in the timber trade of Liverpool and other Mersey ports during 1913 is estimated at 896,000 tons, as against 821,000 tons in 1912 and 737,000 tons in 1911. (These figures include the tonnage which entered the Manchester Ship Canal from the River Mersey.) The business of the past year in the aggregate, as indicated by the above figures, exceeded all previous seasons. The year opened under fairly favorable conditions, comparatively light stocks, a firm market,

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Salmon Lake, Que. St. Moise, Que.
Jacquet River, N. B.

**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

but as the season advanced business became more difficult, labor troubles, it is claimed, causing delay in deliveries and transportation, which tended to check consumption, and dearer money restricted operations.

"On the whole the deliveries were only fair. With the exception of spruce deals and pitch pine, values were fairly maintained throughout the year, and stocks, though ample, at the close of the year were not excessive. For the current season shippers are urged to act with care in shipping moderately. During the spring and summer, freights ruled firm and at high rates, but declined sharply during the late autumn.

"The arrivals of American pitch pine during 1913 were very large, about 8 per cent in excess of the total for 1912. The season, commenced with light stocks and a fairly steady market, but prices for all kinds declined as the season advanced, chiefly owing to drooping freight rates, and sales became most difficult at reasonable prices. The stocks at the close of the year were quite ample for the requirements."

Canadian Stocks at Liverpool and Manchester

H. W. Lightburne & Company, Liverpool, England, and John E. Moore & Company, St. John, N.B., report upon stocks of Canadian spruce, pine and birch at Liverpool and Manchester on April 1st as follows:—

Spruce and Birch

Month Ending 31st March, 1914

Liverpool

	Import		Consumption			Stock		
	1912.	1913.	1914.	1912.	1913.	1914.	1912.	1913.
N.B. & N.S. Spruce & Pine, Stds. . .	2,220	1,840	3,850	2,450	1,950	3,490	3,580	2,900
Birch Logs, Loads	440	0	480	300	400	60	340	400
Birch Planks, Stds.	388	79	200	449	279	261	352	473

Manchester

Spruce, Stds. . .	620	1,680	1,530	3,600	2,390	2,400	5,260	6,840
Birch Logs, Loads	0	0	100	20	40	200	40	300
Birch Planks, Stds.	127	12	24	85	67	91	55	424

Stocks in Manchester and Liverpool Combined

Spruce

	1910.	1911.	1912.	1913.	1914.
Manchester	6,850	6,040	5,260	6,840	11,560
Liverpool	4,990	4,470	3,580	2,900	6,090
	11,840	10,510	8,840	9,740	17,650

Birch Logs

Manchester	120	60	40	300	140
Liverpool	360	260	340	400	540
	480	320	380	700	680

Birch Planks

Manchester	915	6	55	424	370
Liverpool	527	152	352	473	461
	1,442	158	407	897	831

Liverpool and Manchester Markets Weaker

Duncan, Ewing & Company's monthly timber circular dated Liverpool, April 1, has the following to say respecting New Brunswick an Nova Scotia spruce deals: The import to Liverpool for the month was 3,850 standards, leaving a stock on hand of 6,090 standards here. To Manchester 1,530 standards were imported and 2,400 standards were delivered, reducing the stock to 11,560 standards. The market is weaker in Manchester and Liverpool, and liner parcels were sold during March at £8 10s to £8 15s, c.i.f. Liverpool, for an ordinary Halifax specification. Wholesale prices current are quoted as follows: Birch, St. John, 1s 6d to 2s; birch planks, 1s 2d to 1s 4d; spruce deals, St. John, Miramichi, etc., £9 10s to £9 15s.

London Timber Market Report

Churchill & Sim, London, England, in their wood circular under date of April 3rd, report that stocks in the public docks at the beginning of the month amounted to 13,877,000 pieces as compared with 12,350,000 pieces at the corresponding date in 1913.

Deliveries for the first quarter of 1914 amounted to 6,518,000 pieces as compared with 6,274,000 pieces during the corresponding quarter of 1913.

Importations from New Brunswick were as follows:—

Pine deals, 3,000 pieces, against nil pieces in 1913.
Spruce deals, 54,000 pieces, against 105,000 pieces in 1913.
Birch planks, 100,000 pieces, against 64,000 pieces in 1913.

There were no importations from the St. Lawrence.

The month's importation was practically limited to some parcels of birch planks which are wanted, and prices are again inclined to harden. The market for pine deals shows no change, and the stock is ample in view of the demand. Spruce deals were sold somewhat

freely during the month, but recent prices were strongly maintained with here and there a slight improvement in values.

From the pitch pine ports the figures are:—

Deals, etc., 132,000 pieces, against 72,000 pieces in 1913.

Timber, 9,400 pieces, against 23,800 pieces in 1913.

The stock of sawn timber has been reduced during the month, but is still large. Prices fell away under a little pressure to realize, and under the influence of a demand checked to a large extent by labor troubles. The market for deals is weaker, and the stock has accumulated somewhat. Values to arrive are fully maintained, and tonnage rates are inclined to strengthen a little, so that timber should be good holding until business is less hampered by industrial disputes, for there is much contracting work waiting to be carried out when normal conditions are restored.

British Columbian and Oregon Pine.—There is too much wood instock at present, and prices are lower. Quotations ahead have been reduced by a reduction in the rates of large sailing ships, and the outlook for the market in the immediate future is by no means satisfactory.

Prices current are quoted in the circular as follows:—

St. Lawrence Pine Deals, etc., per P.S.H.:	£	s	£	s
1st bright and dry, regular sizes	41	to	52	
1st bright and dry, oddments	27	"	30	
2nd bright and dry, regular sizes	26	"	29	
2nd bright and dry, oddments	18	"	20	
3rd bright and dry, regular sizes	15	"	18	10
3rd bright and dry, oddments	12	"	16	10
4th bright and dry, regular sizes	12	10	"	15
4th bright and dry, oddments	9	10	"	12

St. Lawrence Spruce Deals, etc.,	£	s	£	s
First, regular sizes	16	"	22	
Second, regular sizes	12	"	14	
Third, regular sizes	11	10	"	12
Fourth, regular sizes	11	"	12	
Battens,	10	10	"	11
New Brunswick Spruce Deals, etc.	10	10	"	11
Oddments, Battens and Fourths	9	"	10	

Quebec Timber, per load	
Yellow Pine	120s to 250s
Oak	140s to 160s
Elm	130s to 280s
Birch	80s to 130s
New Brunswick, etc., Birch, per load	70s to 105s

The stock of Colonial timber, deals, etc., at the public docks at the first of the month is reported as follows:—

The stock of Colonial timber, deals, etc., at the public docks at the first of the month is reported as follows:—

Colonial Pine Deals and Battens in Pieces	1914	1913	1912	1911
Red Pine	508,000	403,000	344,000	456,000
Spruce ditto	19,000	22,000	45,000	59,000
Oak Timber	739,000	460,000	477,000	469,000
Colonial Pine Deals and Battens in Loads				
Oak Planks, etc. (American)			32	34
Birch Timber	259	183	227	164
Birch Planks	4,927	4,339	3,613	2,320
Elm Timber	1,492	234	436	782
Ash Timber	40	6	.....	.....
Yellow Pine Timber	902	766	284	131

Glasgow Market for Canadian Stocks

Calder, Henderson & Livingston, Glasgow, in their quarterly timber market report under date of April 1st, say:—

St. Lawrence:—There was no import of waney yellow pine during the quarter. As evidence of the extremely poor demand the consumption only totalled the low figure of 160 loads. In first class boardwood no business was transacted, notwithstanding the tempting inducements in price made by tired holders of stock. A small lot of prime Idaho wood out of a parcel that came forward from the Pacific Coast, and of a very attractive specification, was sold to a shipbuilder at a very cheap price. Only one or two minor sales at a low figure of 2nd class boardwood came under notice. Stocks are very heavy, and values of first class and second class, in view of the cheaper import cost of new shipments and also the poor outlook, have declined considerably and the tendency is toward still lower figures. Square.—Was never asked for. There is only a trifling stock.

The demand for elm has been quiet. Values of first class large size have been fairly well maintained. First class oak of good specification was in demand and realized firm prices. Stocks of this description are now pretty well cleared. The market is entirely bare of hewn birch logs and there are enquiries for 15-in. average and up. Planks have sold well and there are no stocks in first hands.

Pine.—Firsts—There were few enquiries and these were principally for undersizes. Some deals about 13 inch average were sold at from £40 to £41 per St. Pet. Std. No sales of regulars came under notice. A small lot of undersizes sold well at £31 10s. Good



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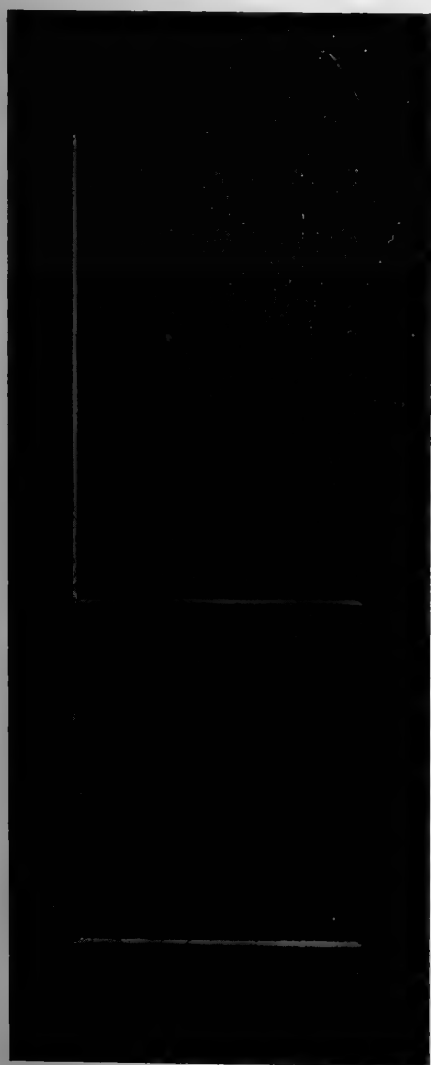
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pine sidings were weak in value and were sold down to £28 17s 6d per St. Pet. Std. for 11 to 11½ inch average.

Seconds—Were in poor request. Broad deals sold at from £30 to £31 10s. No transactions took place in regulars owing to the absence of stock. Undersizes sold at around £20 12s 6d per St. Petersburg Standard.

Thirds—The demand was principally for regulars and a fair quantity was disposed of. Broad deals sold at from £19 5s to £20 5s; Regulars at £18 5s to £18 10s; Undersizes from £13 10s to £14 10s per St. Petersburg Standard.

Fourth—Broad deals were not enquired for. Quotations were around £13 10s to £14 10s. Regulars were slow of sale at from £13 5s to £13 15s per St. Petersburg Standard. Undersizes were neglected.

Red Pine.—The stock is very light, but is sufficient for the existing poor demand. 9 x 3 Merchantable quality is quoted at from £11 to £11 10s per St. Petersburg Standard.

Spruce.—Enquiries were not numerous, and were confined mostly to 9 inch and up, and values of these were firm. 7 and 8 inch Deals were quiet and prices were barely steady. The stock is mostly of narrow specification and although moderate is quite ample.

New Brunswick and Nova Scotia.—Birch—Logs—Arrivals were light but enquiries were not numerous, and although the stock is low it is sufficient for present wants. 14 inch average was sold at 21d per cubic foot.

Planks.—While stocks in first hands have been cleared, merchants have still a large holding, but values, however, have been fairly steady.

Deals and Battens.—Pine—A small shipment came forward and went to store. There is no outlet at present for this class of pine.

Spruce.—Arrivals were light. The demand has been disappointing and sales for the most part were of a retail character, buyers holding off in anticipation of lower prices. Values declined and the tendency is towards lower figures, principally in the narrow sizes. Deals 9 inch and up were in best demand and sold around £11 to £11 10s, the narrow sizes 7 and 8 inch from £9 10s to £9 15s per St. Petersburg Standard. The stock is moderate, but is ample in view of existing demand.

Retail Yard Management—Some Pithy Advice

By T. A. McAllister

The following advice in the form of a series of don't's" is the result of my experience after managing a retail yard for many years. Managers who follow out the following ideas will find their troubles greatly reduced.

1st—Don't neglect to keep in touch with general methods in the building trade.

2nd—Don't neglect to keep your stock well graded in the yard.

3rd—Don't crowd down your grades to make your prices compete with other lumber yards, as this is the first wave that will upset your business.

4th—Don't buy poorly sawn or manufactured lumber because you get it cheap.

5th—Don't promise a customer to fill a bill without a prospect of doing so.

6th—Don't let your stocks run down so that your customers have to go elsewhere to get their bills filled.

7th—Don't try to hold a troublesome customer.

8th—Don't neglect to establish a good collecting system.

9th—Don't help to support a lazy lawyer or collecting company at the expense of the hardworking customer.

10th—Don't neglect to advertise your business liberally in your own country lumber trade journal, as it is surprising how much confidence is placed in an advertising business, as compared with one placed in a general newspaper by builders, contractors and architects.

No doubt much depends upon where the yard is situated and how it is laid out for convenience, but I must say I have seen more trouble arising from the above-mentioned mistakes than from the inconvenient laying out of yards. The ordinary lumberman, in looking over a well laid out yard will keep it in mind better than he would the particular system of getting business and keeping it.

Trade Enquiries

The Dominion Government weekly Trade & Commerce report recently contained the following enquiry. The name and address of the enquirer may be obtained by writing to the enquiries branch, Department of Trade & Commerce, Ottawa, stating the number of the enquiry.

249. Veneer Panelling.—A London firm wishes for the addresses of Canadian firms who can contract to supply birch or maple veneer panelling in large quantities.

Lumber and the Panama Canal

That the importance of Douglas fir as a factor in Eastern markets will be very great after the opening of the Panama Canal, is apparent from the large amount of space which is being devoted to it in the general and the lumber trade press. The New York Lumber Trade Journal, in its latest issue, has an article with a great deal of interesting information upon this subject which we reproduce herewith:—

Douglas Fir

The Panama Canal will in course of time mean more to Douglas fir than to any other single article of commerce. No other commodity is likely to constitute so large a percentage of the total volume of traffic through the new water route as this product of Washington, Oregon and British Columbia.

Lumber now ranks third in point of quantity transported by rail and water, coal and iron ranking first and second respectively; but in the movement of freight through the canal lumber will undoubtedly take first place in time, and of the many varieties of the product that will be carried from ocean to ocean, Douglas fir will exceed any other in bulk. The grounds for making this prediction are reasonable. The estimated stand of Douglas fir timber in the United States is greater than that of any other soft wood and more than the combined stands of all the hardwoods. According to United States Government Forest Service reports the available supply ranges from 300 billion to 350 billion feet, a supply which at the present rate of yearly consumption of Douglas fir (5 billion feet) will last for sixty years or more.

Douglas fir is considered as perhaps the most important of American woods. Though it ranks second to Southern Yellow Pine in point of quantity manufactured, in the variety of uses to which it can be put it now has first place. Fir to the far West is what white pine is—or rather has been—to the East, useful for almost every purpose for which wood can be used. White pine would continue no doubt to hold supremacy in its wide scope of usefulness did not its vanishing sources of supply and consequent high price tend to greatly restrict its field.

It Grows

Douglas fir grows in ten States of the Union and is known by as many names. In the East and in foreign countries it is best known by the name of Oregon pine, in California it is called spruce; it is also referred to as Douglas spruce, Washington fir, Oregon fir, red spruce, Puget Sound pine, and British Columbia pine; also as we shall read later by the names of red fir and yellow fir. But the name used more than all others is "Douglas Fir."

The species is most abundant and attains its largest size and greatest importance for commercial purposes not far above sea level in Southern British Columbia and between the coast of Washington and Oregon and the western foothills of the Cascade Mountains. The trees in this territory grow to a height of from 200 to 300 feet, close together, the fir, mixed here and there with hemlock and cedar, forming very dense forests that yield from 35,000 to 60,000 board feet per acre, and frequently as much as 100,000 feet or more. Indeed, some acres will cruise as high as 500,000 board feet to the acre. When compared with the average of perhaps not more than 6,000 to 8,000 feet in other sections of the country, these figures seem incredible; and yet when it is known that a single fir tree has scaled as much as 60,000 board feet and that frequently a tree will yield as high as 15,000 feet or more of lumber, it is not difficult to understand how these immense acreage totals are reached and that a comparatively few trees within the area of an acre will make a surprising acreage. It may be interesting here to refer to some actual measurements recently made in a Puget Sound logging and milling operation. The logs from four Douglas fir trees taken at random were measured, not particularly to ascertain the total footage in the trees, but to arrive at the taper and number of feet in each log. Hence while the following figures do not indicate the full height of the tree nor the actual number of logs sawn from them, they will serve to illustrate the lumber contents of the general run of logs:

Tree No. 1—Three logs scaled a total of 4,520 feet. Diameter at butt, 42 inches; top diameter at 104 feet, 28 inches.

Tree No. 2—Three logs scaled 7,114 feet; butt diameter 52 inches; top diameter at 104 feet, 34 inches.

Tree No. 3—Four logs scaled 10,880 feet; butt diameter, 60 inches; top diameter at 136 feet, 34 inches.

Tree No. 4—Four logs scaled 14,973 feet; butt diameter, 72 inches; top diameter at 104 feet, 40 inches.

Red and Yellow Fir

There is a wide variation in the character and grain of Douglas fir. In color it varies from a reddish-brown to a clear yellow, and in grain it may be coarse, medium or fine. The diameter growth of the tree for the first fifty or one hundred years is rapid, resulting in a coarse grain wood, while the later stages of growth are as a rule

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slower and result in a fine grained wood. Because of these decidedly different characteristics, Douglas fir is divided by lumbermen into two classes: Red fir and yellow fir. Red fir, of a reddish tinge in color, has a coarser grain than yellow, and is usually obtained from second growth timber or from the heart of older trees.

Yellow fir is usually close grained, soft and fine in texture, comes from the outer portion of mature trees, and runs into a larger percentage of clear lumber.

Red fir is the wood most commonly used for structural purposes and in the merchantable grade is slightly stronger than yellow fir.

The results of a number of government tests show the percentage of select grade in red fir to be 34, in yellow 48. Merchantable grade, red 34, yellow 35. In seconds, red 27, yellow 17.

This indicates that as a rule yellow fir contains fewer defects than red. The yellow fir has an average of 15 annual rings of growth to the inch, while red fir has an average of 9. The rate of growth therefore in yellow fir is considerably slower and more uniform than in red. The rings of old growth yellow fir are so close together in many instances that it is impossible to count them without a microscope.

As many as 700 rings have been counted on a single stump, and no doubt trees may be found that reach an age of more than 700 years. There are whole forests of trees averaging 5 feet in diameter and some may be seen as large as 15 feet. The trees near the coast, which are 200 years old, average 200 feet in height and have a diameter breast high of not less than 36 inches. From this growth may be produced timber and plank clear of knots and other defects for 100 feet in length.

We call attention to these differences between red fir and old growth fir for the reason that they roughly mark the time between the material that is largely used for structural timber and the beautiful grained material that has such exceptional qualities for interior trim and other forms of lumber, for which it competes with high-class pine. It might be truly said that it is because of these widely different features in the same wood that Douglas fir can be put to such varied uses.

Strength

The United States Government Forest Service has made many tests of the strength of Douglas fir. Tests on bridge stringers indicate that red fir in dimension sizes is slightly stronger than yellow, while the tests on car-sill sizes and small clear specimens show a slight increase in strength for yellow fir. The difference in strength, however, is not enough to warrant a discrimination in favor of either red or yellow fir.

Reports of the Forest Service state that Douglas fir as a structural timber is not surpassed, and though it stands second in breaking strength to long leaf pine, it is considerably lighter in weight.

The average results secured from the tests on Douglas fir and of those on other structural timbers is shown in the table given below. Large-sized green timber was used in all of the tests upon which this table was based except for longleaf pine, which was partially air dried, and this fact explains in part the apparent superiority of longleaf pine over Douglas fir.

Species	Bending Tests		
	Fiber Stress at Elastic Limit, Lbs. per Sq. Inch	Modulus of Rupture, Lbs. per Sq. Inch	Modulus of Elasticity, 1,000 Lbs. per Sq. Inch
Longleaf Pine	3,800	7,200	1,560
Douglas Fir	4,000	6,000	1,510
Loblolly Pine	3,200	5,600	1,430
Short Leaf Pine	3,300	5,600	1,470
Western Hemlock	3,700	5,600	1,320
Western Larch	3,500	5,400	1,410
Tamarack	2,800	4,600	1,220
Norway Pine	2,600	4,000	1,190

Grouping these species according to their breaking strength, we find that Douglas fir and longleaf pine are the strongest; loblolly pine, shortleaf pine, western hemlock and western larch form an intermediate group, and that Norway pine and tamarack are the weakest.

In the quality of weight the marked difference between the longleaf pine and Douglas fir may be noted in the following table.

All wood contains moisture in varying quantities. Green Douglas fir may contain as much as 10 pounds of water per cubic foot. In comparing the weights of various woods it is necessary therefore to reduce them to the same moisture content.

Species	Weight per Cubic Foot, Pounds	
	Air Dry Weight Lbs. per Cu. Foot	Kiln Dry Weight, Lbs. per Cu. Foot
Longleaf Pine	41	36
Douglas Fir	33	29
Loblolly Pine	36	31
Shortleaf Pine	35	30
Western Hemlock	32	28
Western Larch	35	30
Tamarack	35	30
Norway Pine	29	25

Other Qualities

While Douglas fir stands at the head of the woods in the matter of weight and tensile strength, it also has other qualities which commend it for structural purposes. The durability of the timber compares favorably with other species, since the trees have a comparatively small amount of sap wood and practically all structural timbers are cut from that portion of the tree nearest the heart. Douglas fir is practically free from shakes, and checks are only occasionally encountered in green timber, although they develop as the wood seasons. When it checks from drying the strength of the timber is not reduced below what it was in a green condition, since the increase in the strength of the wood due to seasoning more than offsets the weakening effect of the checks.

Large and Long Sizes

In the production of large spars, dredger spuds, long piling and tall flag poles, Douglas fir is not equaled by any other wood in the world. It stands in a class by itself. From what other species suitable for these combined purposes could be produced a mast 120 feet in length and 36 inches in diameter at the deck, or a spud 36 inches by 40 inches and more than 90 feet in length, or immense quantities of piling, ranging from 80 to 110 feet long, or a flagpole 220 feet tall and about 22 inches square at the butt? These figures are taken from sticks actually logged, manufactured, shipped, delivered and erected for the purposes named.

The opening of the canal and the use of steamers built especially for carrying lumber will enable unusual lengths and sizes to be brought to the Atlantic Coast to better advantage and at much less cost than heretofore, and it may be safely predicted that the demand for Douglas fir for these particular uses and for timber generally will have a rapid and substantial growth.

Piling and Poles

The long, straight, slightly tapering trunk of Douglas fir and its strong, resilient and durable qualities particularly fit it for use as a pile timber and for poles. As the supply of cedar poles diminishes and a satisfactory butt preservative treatment is found for Douglas fir, it will probably be substituted for cedar, although even now it is used to a considerable extent for telephone and telegraph poles, and in cities, where utility and handsome appearance are combined, large and attractive sawed poles of fir are in use on many street car lines.

Douglas fir is frequently preferred to all other available species for mine timbers, because of its durability, lightness and strength, and it is used for this purpose as far East as Pennsylvania and in foreign countries.

Lumber Manufacturing Methods

By G. D. Keller

One of the most skillful sawmill men in the country, who was recently discussing that business, made the statement that most lumber just happens, instead of being manufactured. He took the ground that the average sawmill does not produce anything like the quality of lumber that it should, and that this is caused by reason of the fact that most of the attention is given merely to keeping the saws going, instead of getting the best possible results out of every log that is put on the carriage. While his indictment of sawmilling methods is probably not true as regards many of the lumber manufacturers of the country, the fact that there are many former sawmill men who have found it more profitable to confine their efforts to the timber business, without attempting to operate a mill, suggests that there must be something in his beliefs.

The main trouble, according to most sawmill experts, is that the sawyer is not enough of a grader. In other words, he is not taught to work with the end in view of producing the best, and not necessarily the widest, lumber. Sometimes, it is pointed out, the widest stock is the cull lumber, whereas this should be the narrowest, showing that proper attention has not been paid to this detail of manufacturing. The temptation to cut the log as far as possible on one side without turning is responsible for this condition. If proper care is taken to look for indications of the knot or other defect which will reduce the grade of the lumber, the log can be turned before the knot is opened, and thus the grade of the lumber will continue high.

Another point where errors are frequently made is in giving instructions to the sawyer to manufacture a given quantity of a certain thickness. It frequently happens in cutting a log that one dimension will be found better, as far as getting quality lumber is concerned. If iron-clad instructions are given and the sawyer has no choice in the matter, he is frequently compelled to produce boards which are below the grade it was possible to have secured from the log being cut up.

On the other hand, there are certain practical objections to this

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plan which make it impossible to allow the sawyer as much leeway as many think he should have. The labor of sorting a large number of thicknesses after they have been cut would add greatly to the expense of running the mill, and it is a question as to whether the increased value secured would more than offset the handling charges. Nevertheless it would seem to be fairly easy to demonstrate that the man at the saw should have enough leeway to be able to avoid the obvious error of making a poor board when he can get a good one simply by changing the thickness.

Logs Should Be Sorted

References have been made before to the desirability of sorting logs before manufacture. Some sawmill men assert that they cannot afford to do this, and that they have to manufacture the lumber just as the logs are piled. This results in oak, poplar, chestnut and ash logs being brought on one after the other, and in the expense of handling being much greater, since the stock has to be sorted to varieties as well as to grade. This disadvantage would be overcome by a traveling derrick, and while the expense of this equipment is considerable, it is likely that the increased facility of handling would pay for it in a short time.

However, the principal point to be considered in connection with bringing all kinds of logs to the saw without being sorted is that no saw can be expected to do good work, or at least its best work, under those conditions. Things may be adjusted splendidly to cut oak, but if a hickory log is put on the carriage next, or a poplar log is brought forward, it is certain that equally good results are not going to be experienced. The sawyer who is constantly confronted with a condition of this kind can hardly be blamed for getting discouraged.

It makes a good deal of difference how a log is brought to the saw. If a band mill is being operated, the small end of the log should be brought against the saw first, as in this way it gets a better start into the log. On the other hand, a circular saw has been found to produce better work when the butt end of the log is struck first. This is a simple distinction, yet it is not always observed.

A lot of lumber is wasted by unintelligent handling of the edger and trimmer. These two machines can save and make a lot of money for any mill by raising the grade of the lumber, yet it is the exception rather than the rule to find the best men in the mill operating them. Usually it is considered sufficient to have anybody who can perform the purely mechanical work of handling these machines, the best men being reserved for the work of sawing. This is a mistake, and one which could be corrected with excellent results.

Some mills, however, have solved this problem rather well by having their lumber graded immediately after it passes through the edger. In other words, the inspector measures the board, determines whether it should be trimmed or altered in any other way so as to improve the grade, and then sends it on into the yard. The usual way of having it go to the edger and trimmer, and then to the grader generally is ineffective, for the reason that it is a good deal of trouble to lay out a plank and send it back into the mill for resawing. The proper place to determine how the grade can be improved is while it is at the machines where this work can be done. The arrangement of the machines so as to enable the inspection to be made is sometimes difficult. Usually, by having another man whose duty it is to turn the board so the inspector can measure and grade it without having to turn it over with his rule, the difficulty attached to this is eliminated.

Odd Length Trimmer an Important Man

The education of the man in charge of the odd-length trimmer is an important feature, to which too much attention cannot be given. It takes practice and intelligence to operate an odd-length machine to advantage, and to give the manufacturer the best results from his material. In some cases sawmill men have been tempted to discard this machine because they have been unable to get the right kind of operation, but the better plan is to pick out the best man it is possible to get, and then give him plenty of instruction in the importance of the proper operation of his machine. The use of the odd-length trimmer will save many a board from being graded down, and will, when carefully operated, make enough money for the plant where it is used to pay for itself in a comparatively short time.

Referring again to the fact that the character of the log should be studied and the best stock it is possible to make under the circumstances taken out, the sawyer who can solve the problem thus presented by every log which comes before him is a valuable man. Not long ago a prominent manufacturer, who had secured a large tract of oak timber and installed a mill, had given instructions to manufacture all of it into 1-in. plain oak. It so happened that when the logs began coming into the mill it was discovered that on account of their having been attacked by worms, nothing but cull lumber would be produced if the original plan were followed out. There was a conference of the superintendent, the sawyer and the chief executive of the concern, and after discussing the various ways of get-

ting around the obstacle, it was decided to manufacture bill oak instead. It happened that the price on this character of stock began to rise about that time, so that the sawmill man made good money on the output. If he or his men had gone blindly ahead and manufactured plain oak, cut in 1-inch thicknesses, the operation would probably have resulted in a decided loss. This is an extreme case, and probably does not happen often; but it goes to show that the proposition should be studied and the question asked, "What kind of lumber should this log be cut into?"

Frequently a swell-butted log comes into the mill and the question arises as to how to handle it. Experience has shown that the best way is to saw exactly parallel with the outside of the log, instead of parallel with the line of the heart. The reason for this is plain. The defects, shakes and rotted portions of such a log are almost certain to be found at the large end. Consequently the portion wasted by sawing in the manner indicated will be the pyramid formed by the angles at the bottom of the log. In other words, such a method will cause the manufacturer to lose the portion of the log which would make his lumber defective if it were used. There is bound to be waste somewhere on a log of that character, and the point is to put it where it will do the least damage.

Quarter Sawing a Fine Art

Quarter-sawing oak lumber has gotten to be a fine art. The sawyer who knows just how to attack a log in quartering, so as to get the best results, can usually get a job anywhere. It is a difficult piece of work, and for this reason many practical sawmill men agree that there should be a man, picked for the job because of his expertness, whose duty it would be to examine every log intended for quarter-sawing, and select the points at which it is to be cut. In this way all cracks, shakes and knots would be dodged as much as possible, so as to make these defects come in the narrowest lumber. By this plan the ends of the logs would be marked as they came on the mill deck, so that the flitches would be split off in such a manner as to make the most of the opportunities presented. That a plan of this kind would improve the grade of lumber there seems to be no doubt.

The cutting of thick lumber is also a difficult job when the question of keeping the grade up is considered. The flitch should be carefully watched for signs of the underlying defect which will be opened up at the next cut, and turned down when it becomes apparent that a common board would be made if it were to be sawed another time on the same side. After thick lumber is manufactured it is frequently not taken good care of, but is allowed to warp and check so as to destroy a large part of its value. The better plan is to go to the expense necessary to cleat the ends, especially in hot weather, when most of the damage is done, and to board up the ends of the piles to keep the air from circulating too freely. This precaution will keep the stock in good condition, and when it is realized that depreciation on thick lumber means a more rapid loss than on other dimensions, the importance of the plan is understood.

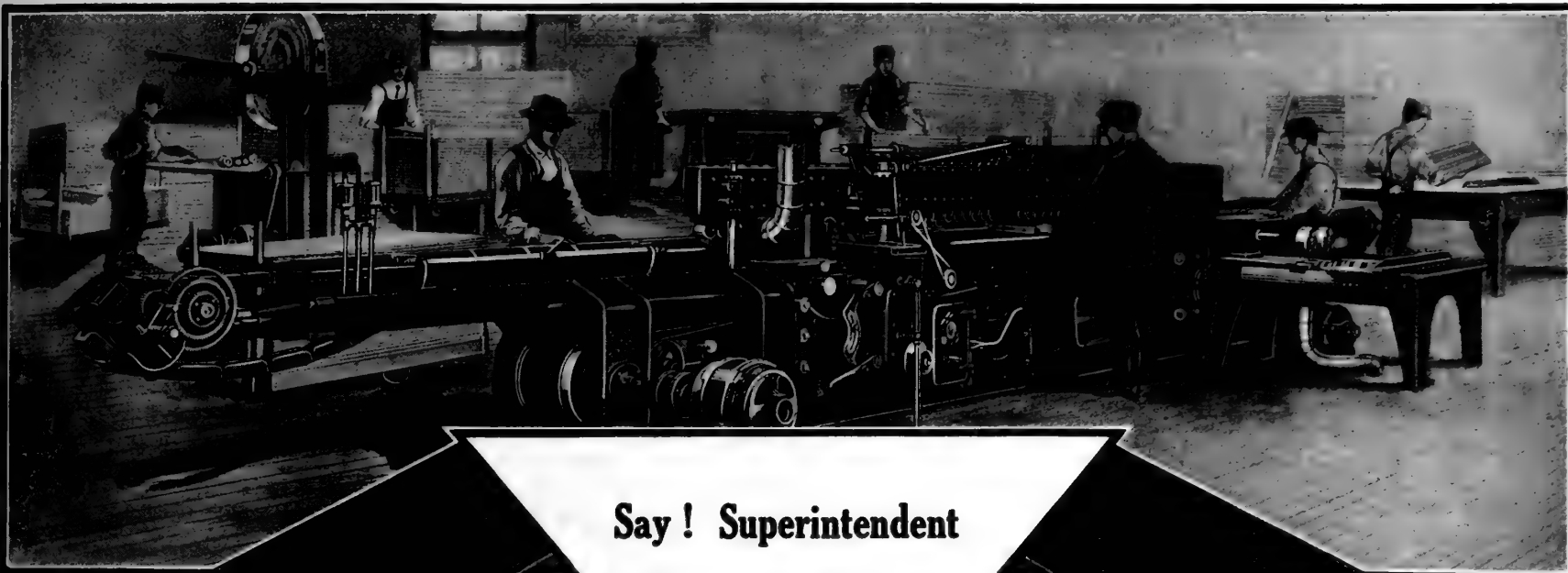
The purely mechanical end of the sawmill's operations should not be underestimated. That is to say, it is necessary to keep one's saws properly filed, to have them properly adjusted and to have the carriage in good shape. But, on the other hand, it is equally necessary that those operations which have to do with the grade of the lumber manufactured be given attention. It makes no difference how perfectly manufactured a board may be, there is a loss to the owner of the mill if it is a common board when it might have been a first or second. The properly-run mill will combine the exactness of manufacture (which should be constantly sought) with the intelligent application of the principles of selection, so as to get lumber which is not only truly made, but which is the best lumber that it was possible to produce from the logs which were cut.—G. D. K. in *The Wood-Worker*, Indianapolis.

Will of the Late Wm. Gillies

Probate has been granted by the Surrogate Court of Ontario of the will of the late Wm. Gillies, well-known lumberman and manufacturer, of Carleton Place, Ont., who died in Toronto in September last, leaving an estate valued at \$210,460. The principal items consist of book debts, promissory notes, cash, etc., \$93,270.50; bank and other stocks, \$81,530; life insurance, \$8,560; real estate, \$25,100. The whole estate is bequeathed to numerous relatives and friends.

Henry Disston & Sons, Inc., Philadelphia, Pa., report that Mr. Frank Gould severed his connection with them on April 20th. For some time past Mr. Gould was sales manager of the hardware department.

John L. Palmer, senior member of the firm of the Palmer Medical Company, Limited, Windsor, Ont., manufacturers of Stewarts Veterinary Remedies, is again on his old territory, calling on the lumbermen and contractors.



Say ! Superintendent

Have you ever figured
the saving a

Linderman Dovetailer

would effect for us ?

LET US FIGURE FOR A FEW MINUTES:—

We cut annually about M. feet of 4-in. common strips, average price per M. \$....., which totals..... \$——

8-in. and 10-in. shiplap brings \$..... per M. If all 4-in. strips were worked into 8-in. and 10-in. shiplap we would receive \$——

GROSS PROFIT ... \$——

COST OF JOINTING ON A LINDERMAN DOVETAILER 75c per..... M.; cost of matching and handling, 50c per M. M. feet at \$1.25 per M. \$——

NET PROFIT \$——

BESIDES, we cut M. feet of 4-in., 6-in. and 8-in., No. 3 grade lumber for which we receive \$....., but for our 10-in., 12-in., 14-in. and 16-in. No. 3 Grades we average \$..... per M. If all were made wide we would receive \$.....; cost of joining and handling \$1.00 per M. \$.....

NET INCREASED PROFIT.. \$——

BESIDES, if we had a LINDERMAN we could cut 2-in., 2½-in., 3-in. and 3½-in. strips instead of leaving them in the slab. We should get about M. feet. In the slab they are worth about \$..... In lumber they are worth about \$..... It will cost about \$1.25 to join and handle \$.....

NET PROFIT ABOUT \$——

BESIDES, we could work all our shorts into full 16-ft. lengths; make grain doors and save 10 per cent. of edging waste, work in our short shorts, besides using the machines for other purposes.

What say you Superintendent ?

SHALL WE WRITE THE LINDERMAN PEOPLE AND INVESTIGATE?
It looks as though we are losing money. Let us send this information to the

Canadian Linderman Co. Limited

MUSKEGON, Mich.

Works at

WOODSTOCK, Ont.

OPPORTUNITIES



WE own and offer for sale on attractive terms a few especially well selected tracts of timber running from 50 million to one billion feet that are ready for immediate operation, having a good local demand at high prices.

The timber on the Pacific Coast is the last stand of the great forests. Well selected timber in British Columbia is the best investment on this Continent and offers especially attractive inducements for manufacturers.



For further particulars, address

A. C. Frost Company

Corn Exchange Bldg.
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Campbell - MacLaurin Lumber Co.

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New **RAILS** Relaying

12 to 80 pounds per yard.

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EDGINGS

Ontario

F. Menard, lumber manufacturer, of Sturgeon Falls, Ont., is putting up a new circular sawmill at Field, on the Sturgeon River, on the line of the C. N. O. Railway.

A report was recently published to the effect that Geo. A. Watson, Flesherton, Ont., intended to erect a plant at Markdale. Mr. Watson advises us that this is incorrect.

John Harrison & Sons Company, Limited, Owen Sound, Ont., report that they have taken out about 35 per cent. more logs during the past winter than usual. They manufactured about 10,000,000 feet.

The Hydro-electric Commission of Ontario will probably purchase about 2,000 cedar poles of various lengths from 25 to 50 ft., for use at Windsor, Ont. The chairman of the local board is D. Bowlby, 32 Sandwich Street West, Windsor, Ont.

The Elora Furniture Company, Limited, has been incorporated with a capital of \$40,000, with head office at Elora, Ont. The provisional directors are J. E. Walser, F. Daub, O. C. Schmidt, P. Daub, and S. B. Jeanneret, all of Elora, Ont.

Work has been commenced at Stratford, Ont., upon an addition to the Kalbfleisch Planing Mill. The cost of the addition will be \$2,500 and it will be 49 x 86 ft. The equipment will include hoisting and covering machinery. The manager is Mr. E. Kalbfleisch.

The Brantford Piano Case Company, Limited, has been incorporated with a capital of \$100,000, with head office at Brantford, Ont. The provisional directors are M. S. Phelps, Rochester, N.Y., and W. D. Schultz, J. Ruddy, J. H. Ham and S. M. Burnley, Brantford, Ont.

A report was recently published to the effect that the Pembroke Lumber Company, Pembroke, Ont., had sold berths No. 1 and No. 2 in Jocks Township, Ont., to J. J. McFadden, of Renfrew, Ont. The company report that this was an error and that they have "purchased" not "sold" these berths from J. J. McFadden.

The Interior Hardwood Company, Wilmot Street, Berlin, Ont., have commenced work upon an \$18,000 addition to their plant. The addition will be five storeys, 160 x 50 feet, of red pressed brick with stone foundation. It will contain pine floors and wood lath. The plant will be equipped with additional woodworking machinery.

The Haight & Dickson Lumber Company, Limited, of Sudbury, Ont., are putting in a new circular mill with a capacity of 15,000 to 18,000 feet per day at Green's Siding, District of Sudbury, on the C. N. O. Railway, which will be ready to start cutting about the end of May. Their other mill located at North Star Mines on the A. E. Railway, with a capacity of 14,000 feet per day, will start cutting May 1st. This company will cut upwards of three million feet this season, nearly all of which will be pine, with a little spruce. The head office of the company is at Sudbury.

Eastern Canada

Messrs. Blair & Rolland have removed from 234 to 130-131 Coristine Building, Montreal.

The partnership between Trudeau and Despariais, lumber merchants, of Sherbrooke, Que., has been dissolved.

William Copping, Joliette, P.Q., reports that he has nearly completed the erection of his sawmill and expects to commence operations early in May.

The firm of Rainville & Robichaud, sash and door manufacturers, of Montreal, has been registered. The members are J. L. Rainville and J. S. Robichaud.

The sash and door factory belonging to Evans and Tite at Bishop's Crossing, P.Q., was recently destroyed by fire. The mill and machinery are a total loss, which was partly covered by insurance. The plant will be rebuilt.

Tenders have been invited for the purchase as a going concern of the business of the late Mr. J. H. Redfern, Montreal. The lumber in the yards totals 3,000,000 feet, while that at the mills amounts to a further 1,400,000 feet. There are also contracts calling for the supply of 1,850,000 feet.

The North Shore Power Railway and Navigation Company, 125 St. Peter Street, Quebec, who operate a large plant at Clarke City, P.Q., have given notice that they will apply during this session to Parliament for an act changing their name to the Gulf Pulp and Paper Company and to authorize them to carry on the said business anywhere in Canada.

The Bathurst Lumber Company, Limited, Bathurst Village, N.B., are constructing a first class dressing and resawing plant at Bathurst Village and hope to have it going by the 1st of June. The mill will be equipped with the S. W. Woods Company fast matchers and with the Mershon resaws. The blower system will be installed by the Allington & Curtis Company, of Bos-

ton. The mill will be driven electrically from power manufactured in the company's plant. The shavings and sawdust from this plant will be blown to the main boilerhouse for fuel, a distance of about 800 feet. The whole plant will be up-to-date and first class, and the company say that it will be the finest of its kind in Eastern Canada. The foundations will all be constructed in concrete and the entire building will be covered with metal.

A despatch from Amherst, N.S., says: A large transfer of timber land was put through by I. J. Soy, of Amherst, recently, whereby some eight thousand acres on the eastern side of what is known as the Economy River Division and belonging to the Nova Scotia Lumber Company, was sold to Mr. J. H. Livingstone, of Wentworth; Mr. Charles Hill, of Truro, and Mr. Starrett, of Bass River. Mr. W. J. Gillespie, of Amherst, is largely interested in the Nova Scotia Lumber Company and with him are associated Mr. J. W. Seaman and Mr. Prescott, of Walton; Mr. Samuel Freeman, East Amherst, and the estate of the late Honorable W. T. Pipes. It is understood that the purchasers have an option on a further two thousand acres of this same property until June 1st. The price is not mentioned but it is rumored to be in the vicinity of seven dollars per acre.

Western Canada

The Pine Tree Lumber Company, Limited, has been incorporated with a capital of \$10,000, with head office at Munson, Alta.

The Mitchell Lumber Company, Limited, has been incorporated with a capital of \$25,000, with head office at Vancouver, B.C.

The Hunting, Merritt Lumber Company, Limited, has been incorporated with a capital of \$100,000, with head office at Vancouver, B.C.

Lutz and Krans, Limited, have been incorporated with a capital of \$100,000, with head office at Victoria, B.C., to carry on business as timber merchants.

The Alberta Lumber Company, Vancouver, B.C., recently lost its plant at False Creek, by fire. The loss amounted to about \$100,000 upon the plant and \$50,000 upon other buildings and timber.

The Provincial Government of British Columbia has sold to the British Columbia Sulphite and Fibre Company, who own a pulp mill at Howe Island, B.C., 1,070 acres of timber on the Sutej Channel. The company will undertake to have the area cleared in three years. The holdings comprise 6,000,000 feet of hemlock, 2,000,000 feet of larch and 3,000,000 feet of cedar.

Burnaby municipality, B.C., will shortly have in operation its first shingle mill on the North Arm of the Fraser River when the Shull Company, an American firm with mills in Everett and Portland commence erecting a plant in D. L. 161. This mill will be on the Eburne line of the B. C. E. R. near the South Vancouver boundary and below Riverway. Although Burnaby has numerous mills on Burrard Inlet this is the first one to be erected on the Fraser in the municipality. This plant, which will have twenty-five machines, will be able to turn out half a million shingles a day, employing fifty hands with a monthly pay roll of \$15,000.

Yellow poplar, or tulip tree, the largest broadleaf tree in America, has been known to reach nearly 200 feet in height and 10 feet in diameter.

Hickory is the strongest Canadian wood. When properly seasoned a hickory column will support a weight of twelve tons per square inch cross-section, which is considerably more than what could be borne by a pillar of cast iron or steel of the same length and weight.

A Vancouver lumberman has estimated that "one ton of refuse goes to the burners for every thousand feet of lumber cut." In his own sawmill he has eliminated this waste by breaking-up the refuse into small pieces which are manufactured into fuel briquettes at a cost of only \$3 a ton.

Mr. C. B. Thorne, manager of the Hawkesbury mill of the Riordon Pulp and Paper Company, Limited, has gone to Europe. It is the policy of the Riordon Company to send a man to Europe every three or four years. Mr. Thorne will remain there four months studying conditions and new methods in Germany, Scandinavia and England.

Wistar, Underhill and Nixon, wholesale lumber dealers, Real Estate Trust Building, Philadelphia, Pa., have sent a very useful calendar for the year 1914, to their friends in the trade. The calendar pad is in the form of separate sheets for each business week, each sheet being sub-divided into six sections, upon which is sufficient space for jotting down memos, engagements, etc.

At the annual meeting of the Canada Lumber Sales Company, Limited, Montreal, it was reported that a first dividend on the preferred stock, of 8 per cent., and a first dividend of a similar amount on the common stock, had been declared. It was also decided to increase the capital stock by \$25,000.

German pencil manufacturers are looking to California incense cedar for pencil wood.

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Hoyt Metal Company
Canada Metal Company

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Hamilton Company, William
Waterous Engine Works

BELT DRESSING

Cling Surface Company
Dixon Crucible Co., Joseph

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Federal Engineering Company
Goodhue & Company, J. L.
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Gutta Percha & Rubber Co.
McLaren Belting Company, J. C.
Reddaway & Co., F.
Smith, Nathan

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Ormsby Company, A. B.
Toronto Blower Company

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Jenckes Machine Company
Leonard & Sons, E.

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Morgan Machine Company

CALKS

Steel Company of Canada

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Lamontagne, Limited
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Palmer & Company, John
Palmer Medical Company
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Young, W. F.

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Dixon, F. M.

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McFarlane-Neill Mfg. Company
Pink Company, Thomas

CEDAR

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Coghlin Company, B. J.
McKinnon Chain Company
Pink & Company, Thos.
Standard Chain Company

CHAIN BELTS

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Morris Crane & Hoist Company

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Wistar, Underhill & Nixon

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Benson & Bray Limited
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Heaps & Company
Rat Portage Lumber Company
Rimouski Lumber Company
Tessier, Alphonse

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Heyser Lumber Company, W. E.
Hocken Lumber Company
Hoffman Bros. Company
Miller, A.
Newman, John P.
Partington Pulp & Paper Co., Ed.
Rat Portage Lumber Company
Rimouski Industrial Company
Snowball Company, J. B.
Spencer, C. A.
Stearns Salt & Lumber Company
Webster & Bro., James

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Cameron & Company
Canada Lumber Sales Company
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Eagle Lumber Company
Elgie & Jarvis Lumber Company
Fesserton Timber Company
Graves, Bigwood & Company
Haerberle Lumber Company
Hocken Lumber Company
McGibbon Lumber Company
Mason, Gordon & Company
Partington Pulp & Paper Co., E.
Quincy-Adams Lumber Company
Spears & Lauder
Spencer, C. A.
Snowball Company, J. B.

HOISTS

Morris Crane & Hoist Company

HOSE

Gutta Percha & Rubber Company

KNIVES

Peter Hay Knife Company
Simonds Canada Saw Company

KNIFE GRINDERS

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Christy-Moir Company
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Graves, Bigwood & Company
McGibbon Lumber Company
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Partington Pulp & Paper Co., Ed.
Rat Portage Lumber Company
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Spencer, C. A.
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Burstall & Company, J.
Canada Wood Specialty Company
Canadian Western Lumber Company
Casey-Shaw Lumber Company

Dudley, A. N.

Fassett Lumber Company
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Georgian Bay Lumber Company
Harris Lumber Co., Frank H.
Laidlaw Lumber Company, R.
McLennan Lumber Company
Montreal Lumber Company
Newman, John P.
New Ontario Colonization Co.
Oliver Lumber Company
Parry Sound Lumber Company
Ritter Lumber Company, W. M.
River Ouelle Pulp & Lumber Co.
Victoria Harbor Lumber Company

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Cleveland-Sarnia Sawmills Company
Colonial Lumber Company
Diver, John M.
Donogh & Company, John
Eagle Lumber Company
East Kootenay Lumber Company
Fesserton Timber Company
Forest Mills of B. C. Limited
Fraser-Bryson Lumber Company
Garrett Lumber Company, T. H.
Gordon & Company, George
Gillies Bros. Limited
Graves, Bigwood Company
Hobart & Company
Hocken Lumber Company
Long Lumber Company
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Mason, Gordon & Company
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POLES

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Pink & Company, Thos.

POPLAR

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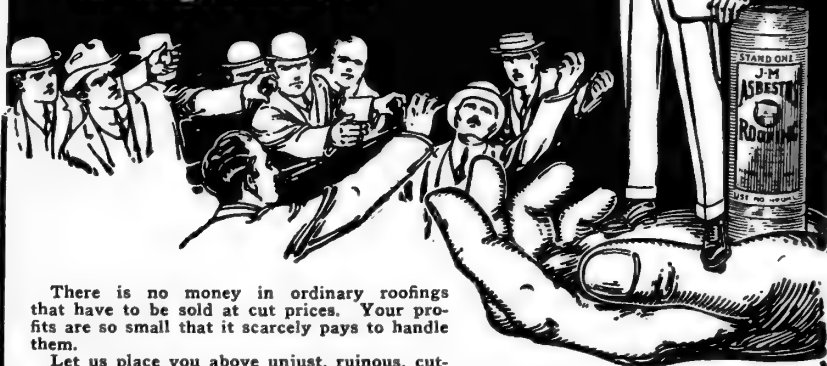
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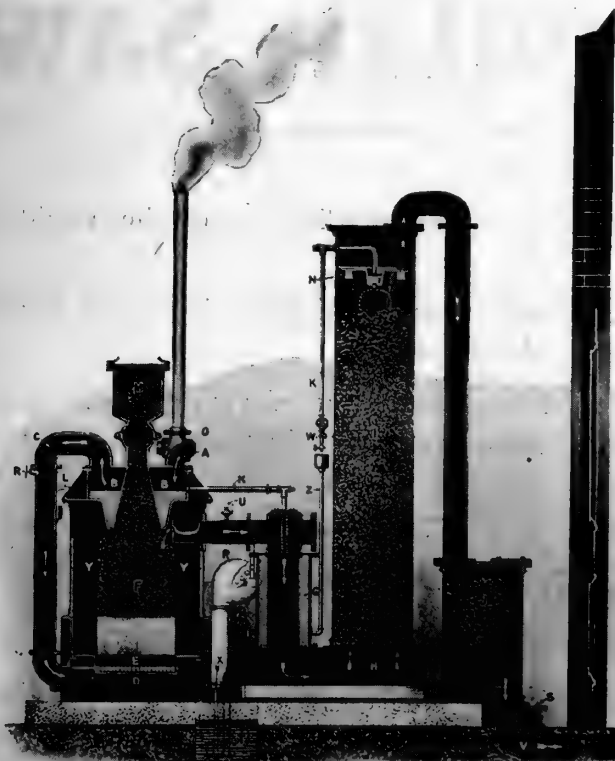
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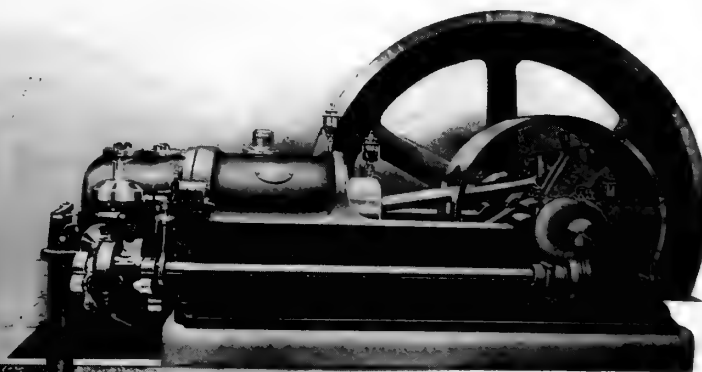
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Rat Portage Lumber Company
Rimouski Industrial Company
Tessier, Alphonse.

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Smith Company, R. H.

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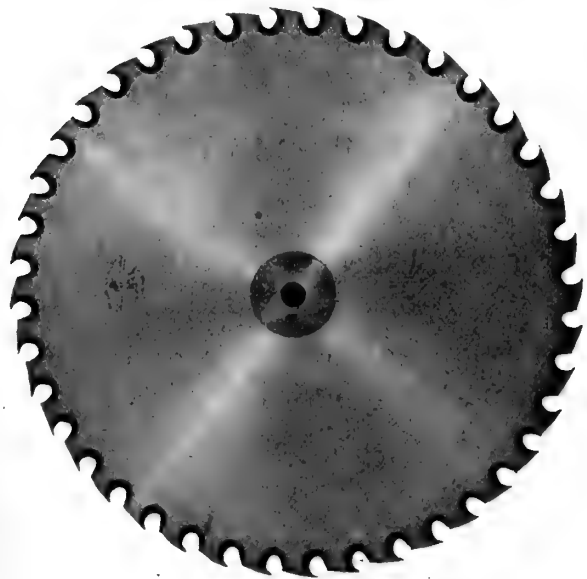
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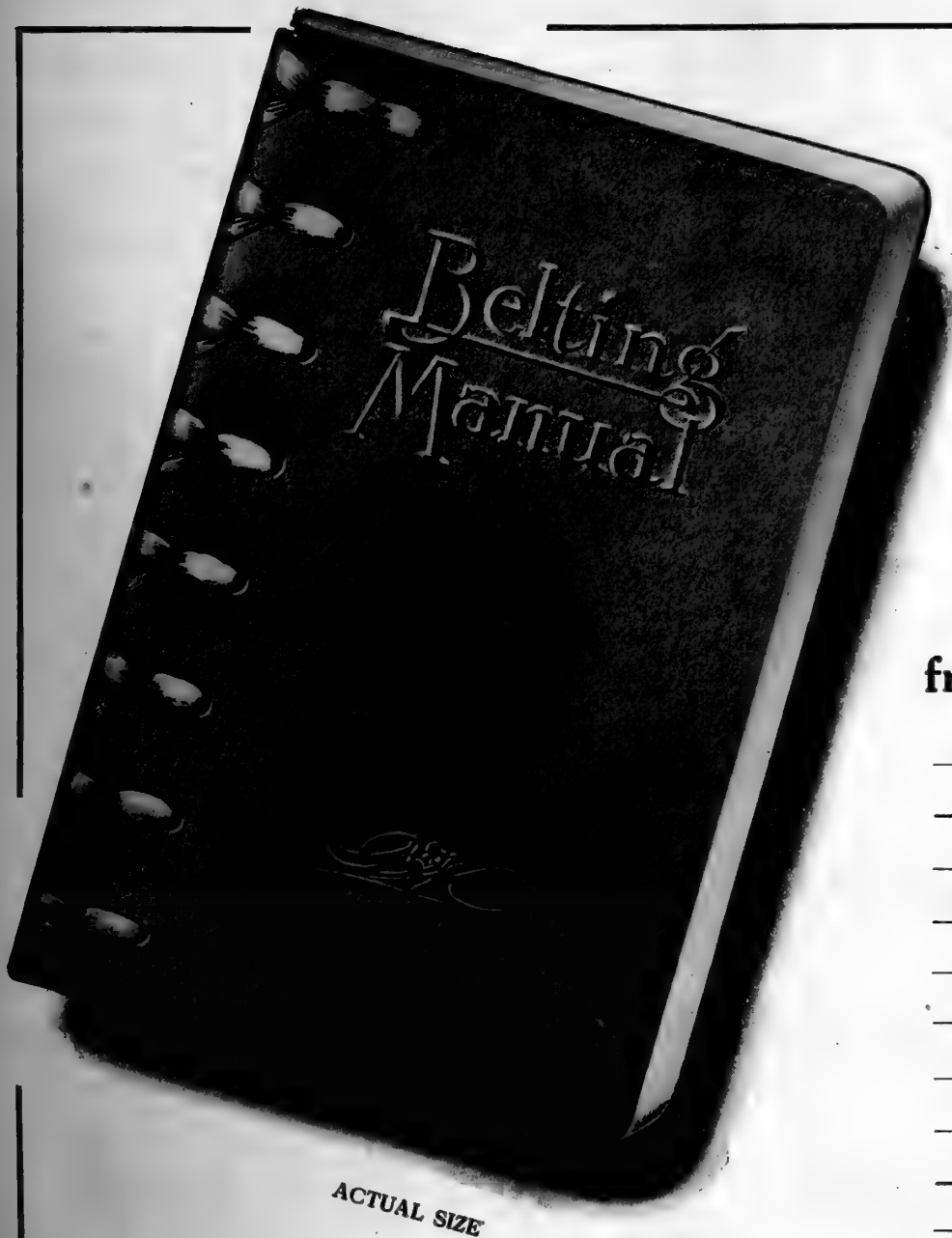
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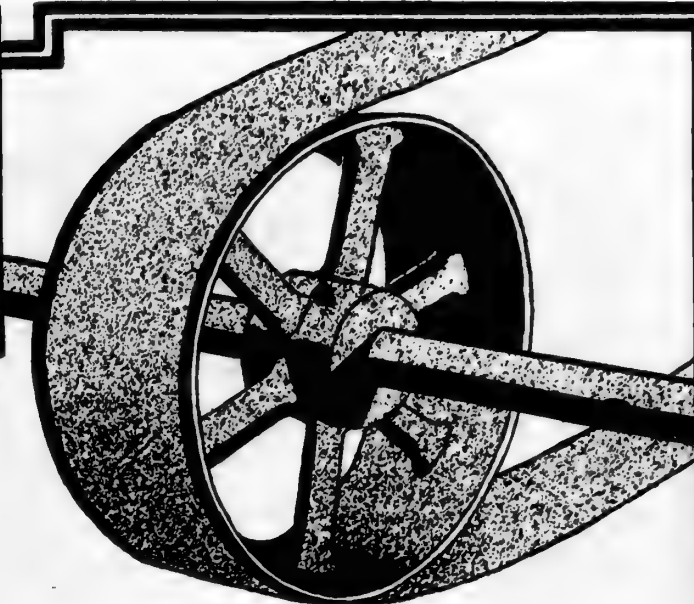
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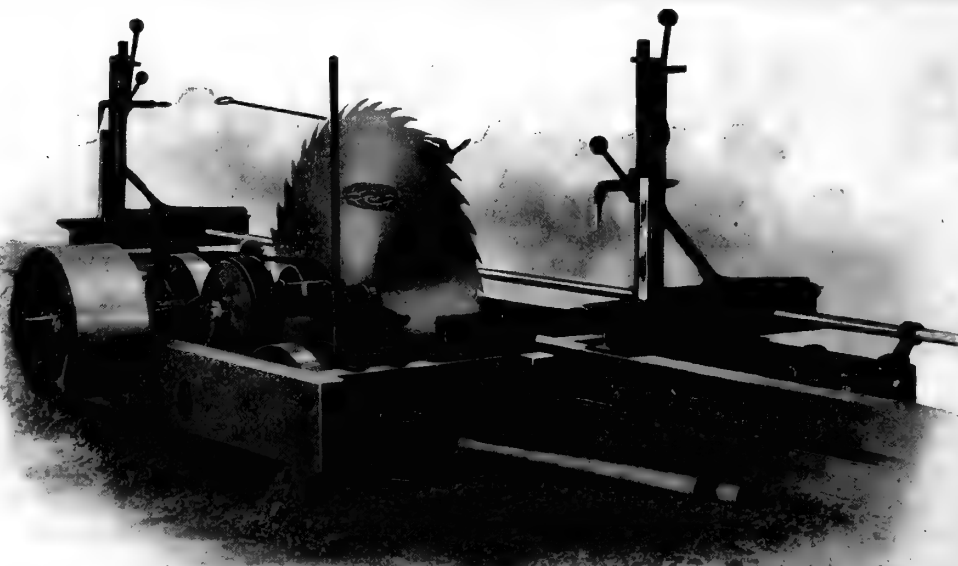
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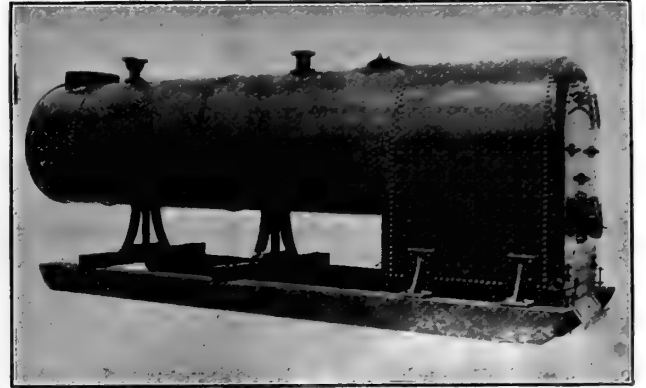
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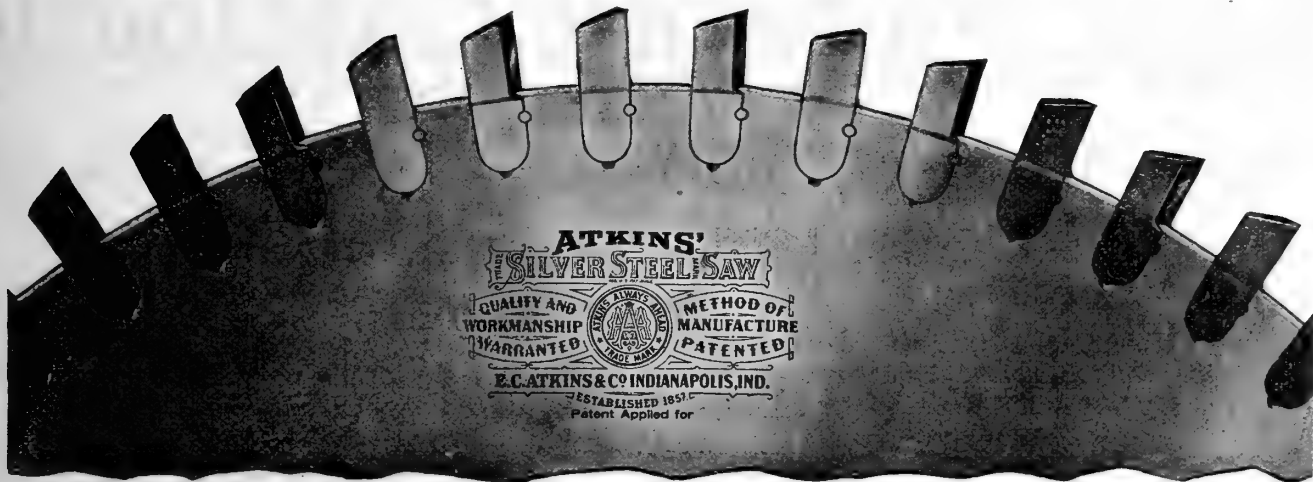
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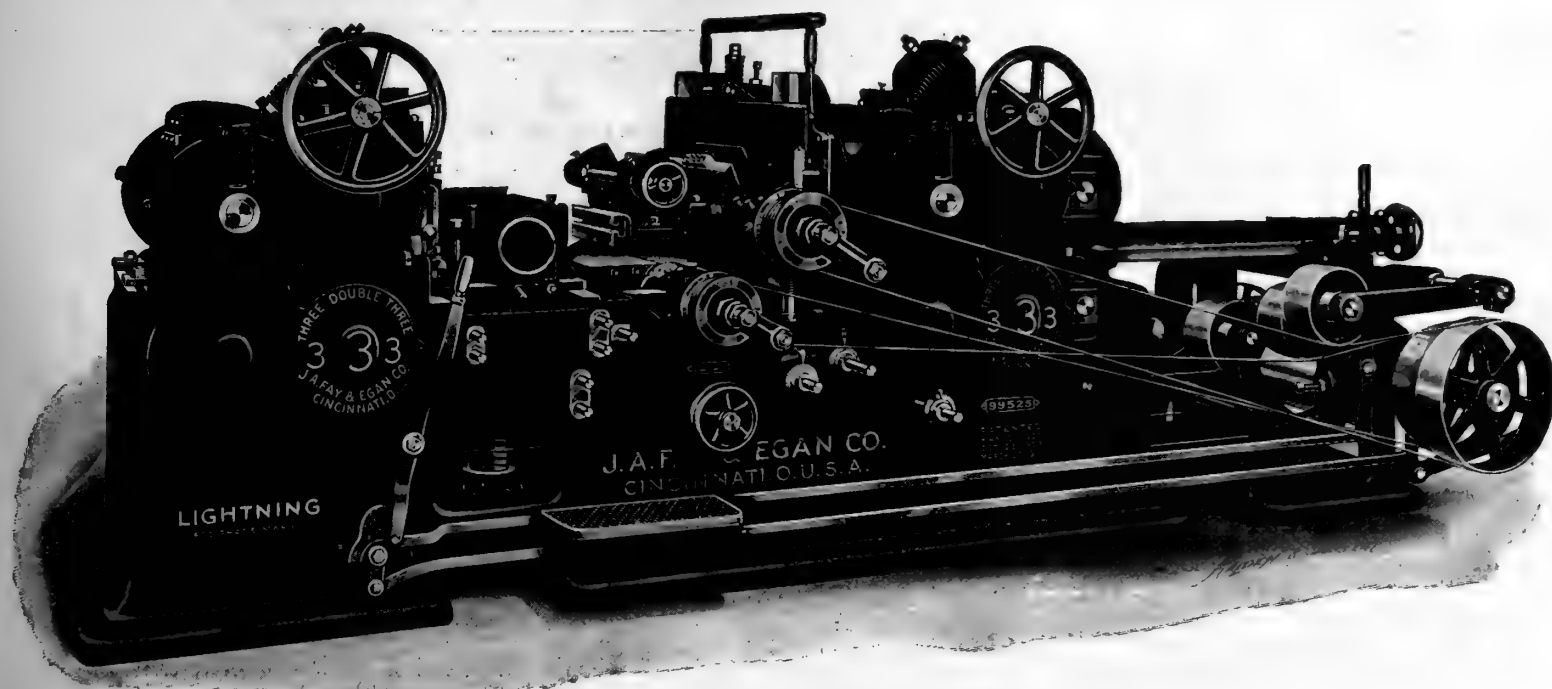


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No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1½, 1½ and 2-in. Fir rough	47 00	47 00
1½-in. No. 1 4-ft. pine lath	4 50	4 50
1½-in. No. 2 4-ft. lath	4 20	4 20
1½-in. 32-in. pine	1 60	1 60
1½-in. No. 1 4-ft. hemlock lath	3 75	3 75
1½-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XX B. C. cedar shingles	2 25	2 25
XXX 6 butts to 2-in.	3 20	3 20
XXXX 6 to 23-16-in.	3 40	3 40
XXXXX	3 60	3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1, com. and bet., 4/4	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4	35 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00
Soft elm, No. 2 and 3, common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00
Rock elm, No. 2 com. and bet. 6/4 and	

8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/4	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00
Red oak, plain 1st and 2nds, 4/4	62 50
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1st and 2nds, 4/4	62 50
White oak, plain, 1sts and 2nds, 1½ and 2-in.	70 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:	
1-in. x 7-in. and up	\$52 00
1½-in. & 1½-in. x 8-in. & up	58 00
2-in. x 7-in. and up	58 00
No. 2 cuts 2 x 8-in. & up	40 00
Pine good strips:	
1-in.	40 00
1½-in. and 1½-in.	52 00
2-in.	52 00
Pine good shorts:	
1-in. x 7-in. and up	42 00
1-in. x 4-in. to 6-in.	32 00
1½-in. and 1½-in.	50 00
2-in.	52 00
7-in. to 9-in. A sidings	25 00
Pine, No. 1 dressing sidings	30 00
Pine, No. 1 dressing strips	29 00
Pine, No. 1 dressing shorts	22 00
Pine, 1-in. x 4-in. s.c. strips	22 00
Pine, 1-in. x 5-in. s.c. strips	24 00
Pine, 1-in. x 6-in. s.c. strips	23 00
Pine, 1-in. x 7-in. s.c. strips	23 00
Pine, s.c. 12 ft. to 16 ft.	26 00
Pine, 1-in. x 10-in. M.R.	27 00
Pine, s.c. sidings, 1½ and 2-in.	30 00
Pine, s.c. strips 1-in.	21 00
1½, 1½ and 2-in.	24 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00
Pine, s.c. and bet., shorts, 1 x 6	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00
Pine, box boards:	
1" x 4' and up, 6'-11'	18 00
1"x3" to 6", 12'-16"	19 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12 ft. and up	17 00
Pine mill culls stock 1 x 12	21 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	16 50
O. culls r & w p	14 00
Red pine, log run:	
mill culls out, 1-in.	18 00
mill culls out, 1½-in.	19 00
mill culls out, 1½-in.	19 00
mill culls out, 2-in.	22 00
Mill culls, white pine, 1"x7" and up	20 00
Mill run Spruce:	
1"x4" and up, 6'-11'	17 00
1"x4" and up, 12'-16"	18 00
1"x9"-10" and up, 12'-16"	22 00
1½"x7" 8-9" and up, 12'-16"	22 00
1½"x10" and up, 12'-16"	22 00
1½" & 2"x12" and up, 12'-16"	25 00
Spruce 1-in. clear (fine dressing and B)	25 00
Hemlock 1-in. cull	13 00
Hemlock 1-in. log run	17 00
Hemlock 2x4, 6, 8, 10, 12/16"	19 00
Tamarac	19 00
Basswood log run, dead culls out	22 00
Basswood log run mill culls out	23 00
Birch log run	19 00
Soft elm, common and better, 1, 1½, 2-in.	20 00
Ash, black, log run	25 00
1 x 10 No. 1 barn	33 00
1 x 10 No. 2 barn	23 00
1 x 8 and 9 No. 2 barn	22 00
Lath per M:	
No. 1 white pine 1½-in. x 4-ft.	4 25
No. 2 White Pine	3 80
Mill run white pine	4 00
Spruce, mill run 1½-in.	3 25
Red pine mill run	3 60
Hemlock, mill run	2 75
32-in. lath	2 00
Pine Shingles:	
xxxx, 18-in.	3 00
Clear butt 18-in.	2 50
xx	1 75
White Cedar Shingles:	
xxxx, 18-in.	3 75
Clear butt, 18-in.	3 00
18-in. xx	2 00
Spruce logs (pulp)	13 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	70
Oak—Michigan and Ohio	75
By the dram, according to average and quality	65
Elm	72
By the dram, according to average and quality, 40 to 45 feet	80

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 22
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1½ and 1½ in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1½ in., 8-in. and up wide 55 00
1½ in., 8-in. and up wide 57 00
2 in., 8-in. and up wide 60 00
2½ and 3 and 8-in. and up wide 75 00
4 in., 8-in. and up wide 85 00

No. 2 Cuts

1 in., 6-in. and up wide 31 00
1½ in., 6-in. and up wide 42 00
1½ in., 6-in. and up wide 44 00
2-in., 6-in. and up wide 47 00
2½, 3 and 4 in., 6-in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide 24 00
1½ and 1½ in., 6-in. and up wide 33 00
2-in., 6-in. and up wide 33 00
2½, 3 and 4-in., 6-in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 18 in. and up 34 00
1½, 1½ and 2-in. 30 00

No. 1 Barn

1 inch 31 00 45 00
1½, 1½ and 2-in. 56 00 45 00
2½ and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1½, 1½ and 2-in. 30 00 36 00
2½ and 3-in. 33 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1½, 1½, 2-in. 20 00 25 00

Box

No. 1, 1, 1½, 1½, 2-in. 22 00 25 00
No. 2, 1½, 1½, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1 1½, 1½ and 2-in. 20 00
No. 2 17 00 18 00

Lath

No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimensions, Rough or S. 1 S. and 1 E.
6 ft. 8 ft. 10 ft. 14x16 ft.
2 x 4 15 00 18 00 22 00 20 00
2 x 6 18 00 18 00 22 00 20 00
2 x 8 18 00 18 00 22 00 20 00
2 x 10 19 00 19 00 22 00 21 00
2 x 12 19 00 20 00 24 50 22 50

PINE, SPRUCE, TAMARAC & LARCH

Mountain Stock

Dimensions

2 x 4-12 20 50
2 x 4-8-14-16 20 50
2 x 4-10-18-20 22 50

2 x 6, 8 to 16 20 00
2 x 8, 8 to 16 20 50

No. 1 Common Boards

4 inch \$18 50
6 inch 21 00
8 inch 23 00
10 inch 23 00
12 inch 23 00

Flooring

4 or 6 inch No. 1 \$33 00
4 or 6 inch No. 2 31 00
4 or 6 inch No. 3 24 50

Shiplap—Finished

4 inch \$30 00
6 inch 22 50
8, 10, 12 inch 23 50

Siding

6 inch No. 1 \$33 00
6 inch No. 2 31 00
6 inch No. 3 24 50

Lath

No. 1 Cedar, Pine, Spruce 5 00
No. 2 cedar, pine, spruce 3 25

PINE—ROUGH TIMBER

Less \$2 per M. 12 ft. 14 and 16 ft.
8 x 6 and 3 x 8 21 00 21 00
8 x 10 23 00 22 00
8 x 12 24 00 23 00
4 x 4 to 6 x 8 21 50 21 50
4 x 10 to 10 x 10 23 50 22 50
8 x 8 21 50 21 50
6 x 14 up to 32 ft. 29 00

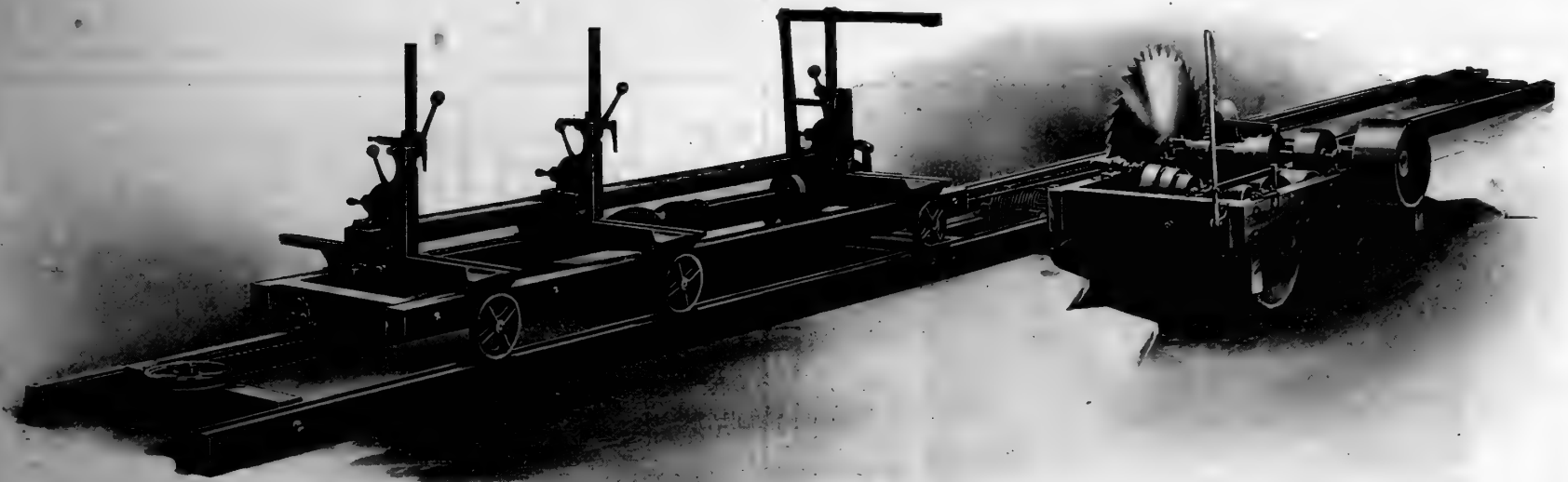
BRITISH COLUMBIA FIR

Dimensions, S 1 S. and E.

4, 2 x 6, 4 x

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High Grade Machinery for the Portable Mill Operator



No. "00" Saw Frame and Carriage

Complete Portable mills, including Power Equipment, Belting and Saws, furnished in various sizes at moderate prices.



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Our No. 32 Edger is a money-maker no mill should be without.

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Represented by:

Robt. Hamilton & Co., Vancouver.
Gorman, Clancey & Grindley, Calgary and
Edmonton.
The Stuart Machinery Co., Ltd., Winnipeg.
Williams & Wilson Ltd., Montreal.

See additional adv. page 78

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24
RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22
SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22
BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23
PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27
ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	98 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00	55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00	40 00	

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	
No. 1, 1 x 8	37 00	
No. 2, 1 x 12	40 00	42 00
No. 2, 1 x 10	35 00	36 00
No. 2, 1 x 8	34 00	35 00
No. 3, 1 x 12	32 00	33 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	29 00	
Canadian spruce boards	25 00	
Spruce, 10 in. dimension	28 00	
Spruce, 12 in. dimension	29 00	
Spruce, 9 in.	25 00	
Spruce, 8 in. and under dimen.	24 00	
10 and 12 in. random lengths, 10 ft. and up	26 00	
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	21 50
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00	
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00	

1 1/4-in. spruce laths	4 40
1 1/2-in. spruce laths	8 80
New Brunswick Cedar Shingles	
Extras	3 55
Clears	3 10
Second clears	2 90
Clear whites	2 60
Extra 1s (Clear whites out)	1 60
Extra 1s (Clear whites in)	1 00
Red Cedar Extras, 16-in. 5 butts to 2-in.	8 55
Red Cedar Eureka, 18-inch 5 butts to 2-in.	4 25
Red Cedar Perfection, 5 butts to 2 1/2	4 30
Washington 16-in. 5 butts to 2-in. extra red clear	8 50 8 80
The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/80-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4c per ft. All F.O.B. Jamestown, New York.	



Engineers all over the world like Cling-Surface.

Here is an example from Africa.

Cling-Surface meets with universal approval from the tropics to the Arctic. Mr. N. Jordan, a consulting engineer, of Lorenzo Marquez, East Africa, writes us as follows:

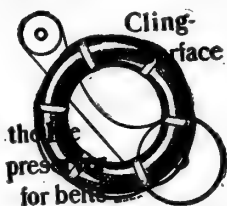
"I have had 5 years' experience with Cling-Surface here and have recommended it with success.

"I first tried Cling-Surface on wood-working machinery having 48-in. saws, running on 14-in. pulleys driven from 36-in. pulley on the countershaft on 20-ft. centers. I gave the belts 10 in. slack to start and had them kept clean. On account of the sawdust I feared the slack would be too much, but they ran splendidly and appear little worse for five years' wear.

Operators of woodworking machinery know how difficult it is to keep the belts free from sawdust and shavings. A sticky preparation here would only make matters worse. Mr. Jordan appreciated that and used Cling-Surface because it acts from the inside of the belt to impart the pliability and gripping power. Of course, dirty or dusty places necessitate some special belt attention, but with reasonable care and Cling-Surface in the belt, operation will be very good under the severest, dirtiest conditions.

True belt economy demands Cling-Surface and the sooner you make the trial, the sooner you will realize the truth of all our claims. The cost of a trial package of Cling-Surface is insignificant in comparison with the benefits and it costs nothing unless you are satisfied.

Ask for literature. We quote f. o. b. Toronto.



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Atlanta Memphis Toronto Etc 59

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Manufacture in Canada—



Harris Heavy Pressure

"The babbitt metal without a fault"

The prime favorite with all engineers

The best babbitt for all general machinery bearings

Manufactured and Guaranteed by

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Order a Box From Our Nearest Factory

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Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs.
(See how this Chain stretched before breaking.)

"Ajax" Loading Chain is made from special steel of highest tensile strength and toughest wearing qualities. Every link of "Ajax" Chain inspected before shipment, and every weld guaranteed perfect.

GET OUR PRICES AND PARTICULARS

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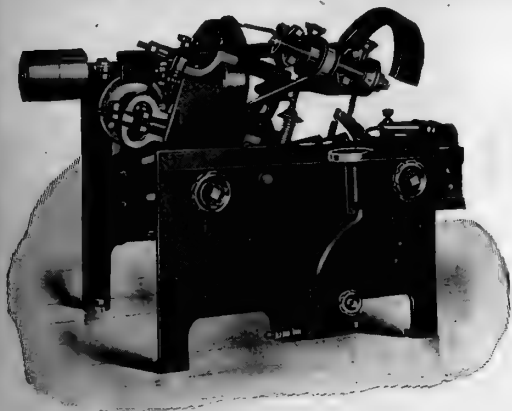
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Band Resaws Are Accurately Sharpened

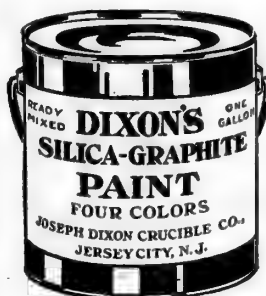


on this automatic machine. It will lower your filing room expense and keep your saws in perfect working order at all times.

It is simple in construction, easy to operate, and the price extremely low.

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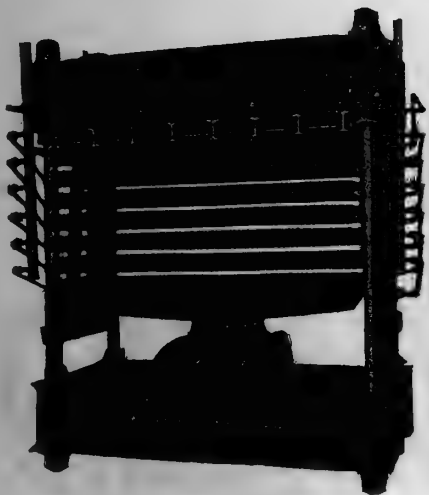
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and repainting will occur less often.
Booklet No. 238-B upon request.

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Established 1827



Veneer Press and Dryer

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

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TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

The Laidlaw Bale-Tie Co., Limited

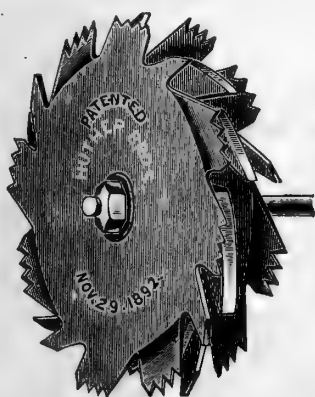
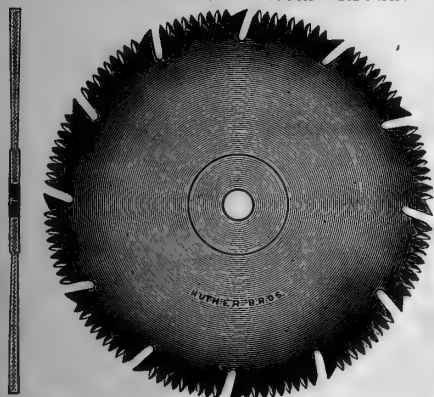
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Hollow Ground Combination Tooth Mitre Saw

Patent Groover or Dado Head

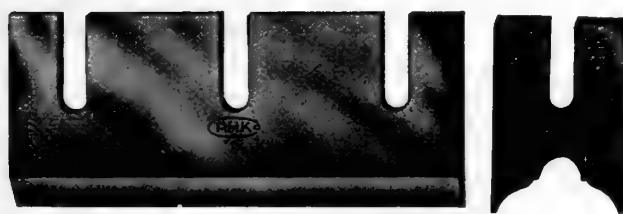


For either Rip or Cross Cutting
Will cut equally as smooth in either Ripping, Cross-cutting or cutting at an angle of 45 degrees, with grain of wood.

Can be used on any Circular Saw Mandrel
For cutting any width groove from 1/8" to 2" wide. Will cut either with or across the grain. (Sent on approval).

Allow us to quote Prices on Saws for any special work that you wish to do.
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The Peter Hay Knife Co., Limited GALT, ONTARIO



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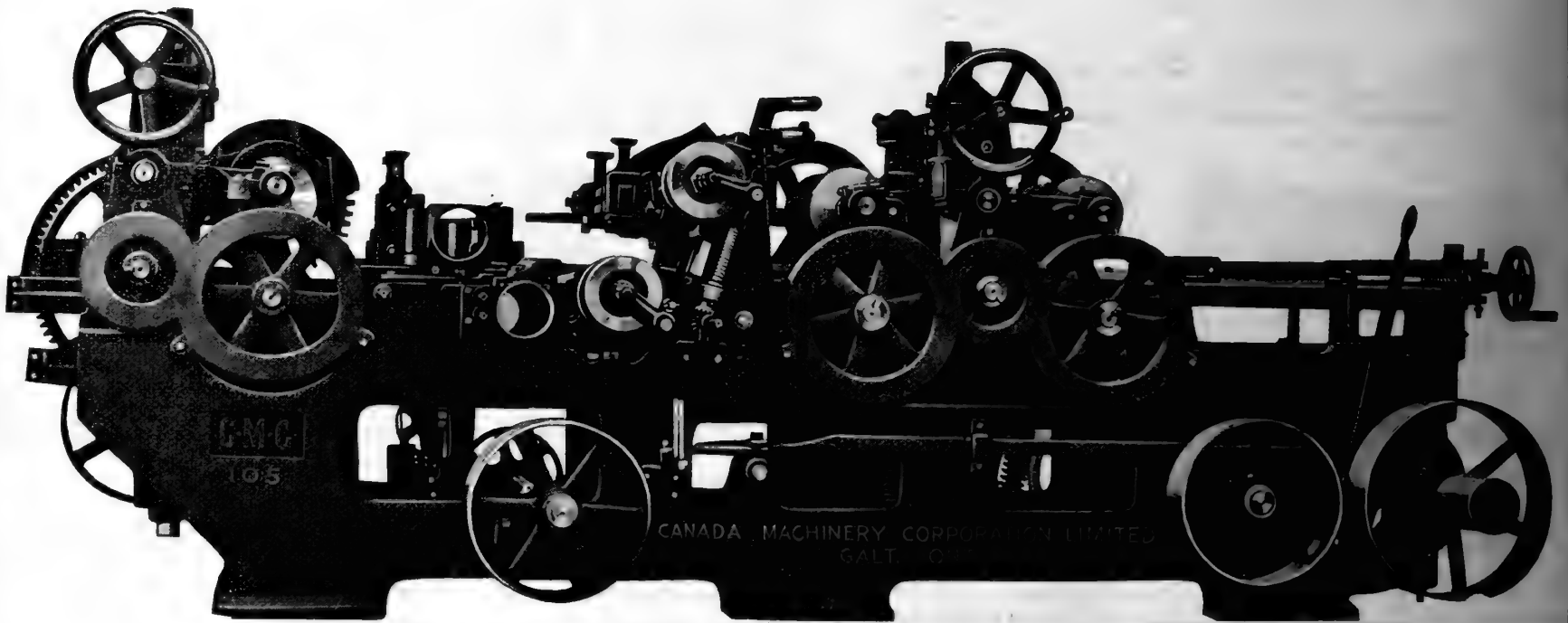
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and Mortise Chisel**



Exhaust Systems

We design and install Exhausting Systems for Planing Mills, Shoe Factories, Pulp Mills, Grinding and Buffing Plants, or for any business where it is desired to exhaust foul air or convey materials by means of fans. We will be pleased to have enquiries.

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PLANER &**MATCHER**

15" Double Cylinder Planer and Matcher

Our No. 105 machine is a general purpose, medium heavy machine, especially suited for the general planing mill.

The feed range is from 45 to 100 feet per minute. Planes and matches 15" wide by 6" thick.

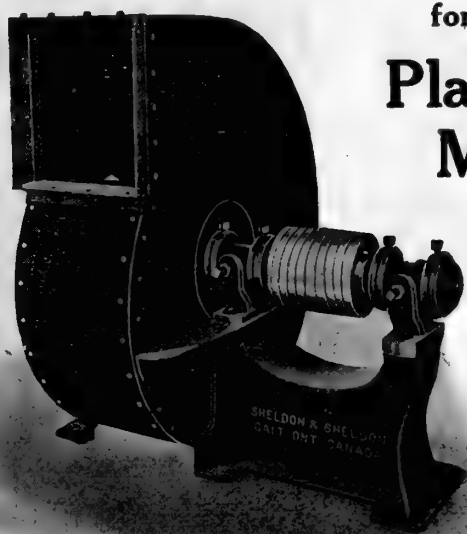
Full details and description contained in bulletin No. 105, sent on request.

Canada Machinery Corporation, Limited

Galt - Ontario

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

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Toronto Office, 609 Kent Building

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Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.
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WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
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Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

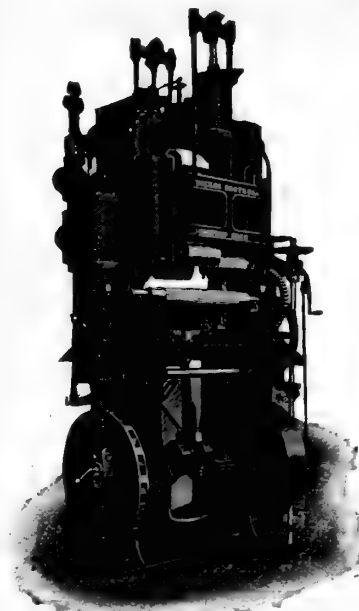
JUST WHAT THE NAME IMPLIES —taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbings (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."



Wickes Brothers

410 White Building - SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

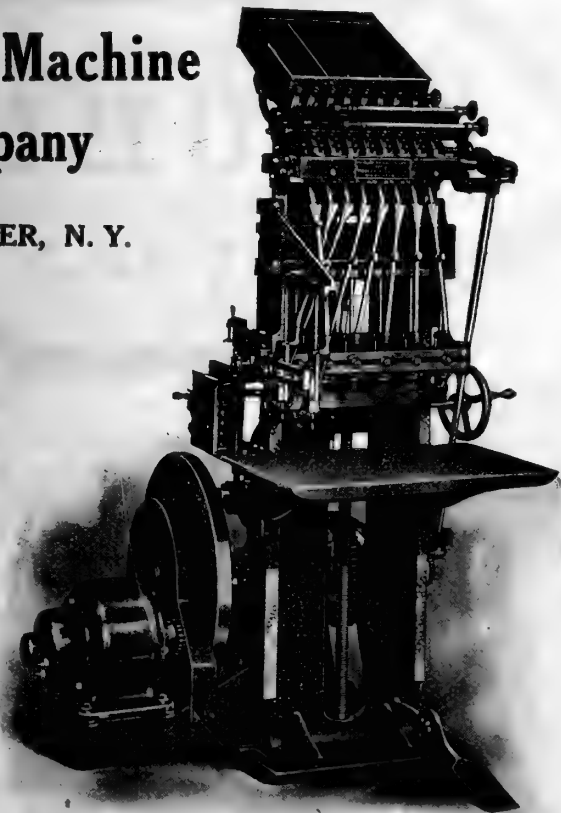
Manufacturers
of—

Nailing
Machines,

Lock Cor-
ner Box
Machinery,

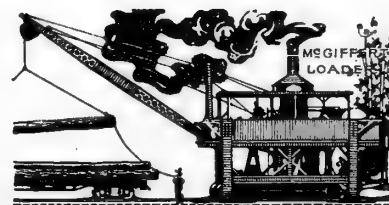
Box Board
Matchers,

Box Board
Printing
Machines.

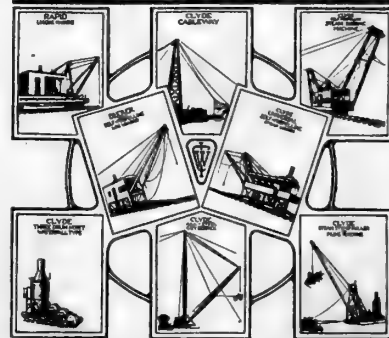


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



A Machine for
every logging
operation



CLYDE IRON WORKS

Duluth, Minnesota, U.S.A.

Are your horses of use to you?

This seems an absurd question—and the answer is always
"Of course they are"—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	\$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic	
1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz.

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.
----------------	---------------

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.

Are Your Horses in Good Condition?

Horses for all lumber work are subjected to the hardest hauling under the most severe conditions. They should therefore be as fit as all possible care and attention can make them.



**In the Lumber Camp,
Around the Mill, In the Yard**

and wherever lumber has to be hauled the horses are always liable to a multitude of small injuries which if not attended to promptly may develop into lameness or disfigurement, thus reducing the working capacity of the horse and impairing its value from a sale standpoint.

You should always have handy and ready for use

Good Liniment

to reduce bruises, strains, soreness; allay pain and inflammation quickly, be an antiseptic dressing to a cut or burn, or to heal a wire cut, wound or laceration.

ABSORBINE

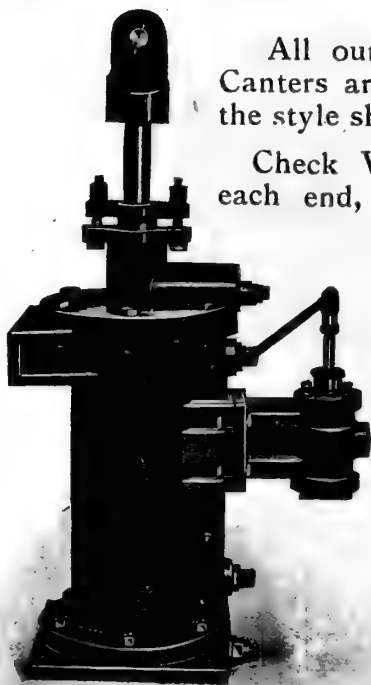
is an antiseptic healing preparation as well as a resolvent and a discutient. It will assist nature in bringing about a dissolution of the bunch, restore the circulation, gradually restoring the part to its normal condition.

It will produce permanent and complete results without blistering or removing the hair, and will leave no blemish. You can work the horse at the same time.

All enquiries on special cases answered without delay—full information and instruction on request. Absorbine \$2.00 per bottle at dealers or express prepaid. Manufactured only by

W. F. Young P. D. F.
424 Lyman's Bldg. — MONTREAL, CANADA

Log-Handling Machinery



All our Loaders, Kickers and Canters are made with cylinders of the style shown in the cut.

Check Valves are provided in each end, and all piping between valve and cylinder is eliminated. These cylinders are extra heavy and very durable, and are absolutely guaranteed by us.

We carry in stock at all times a complete line of Log Deck Machinery—so we can always serve you promptly.

Shall we send our Catalogue?

William Hamilton Company
Peterborough - Ontario

WE CAN
DOUBLE
THE CAPACITY OF YOUR
DRY KILN
GRAND RAPIDS VENEER WORKS

Dry Kiln Service

MEANS
TO
YOU

A Practical Theory
Competent Engineering
Effective Organization
Years of Experience
Guaranteed Results

Grand Rapids Veneer Works

Grand Rapids,
Michigan



The Old Town "Canvas" Canoe

A Friend in Need is a Friend Indeed

DISTRIBUTORS:

Henry Morgan & Co.,
Montreal, Que.

Holt Renfrew & Co.,
Quebec, Que.

F. A. Kirkpatrick,
81 Summer St.,
St. John, N.B.

Grant-Holden-Graham, Ltd.,
Ottawa, Ont.

The T. Eaton Co., Ltd.,
Toronto, Ont.

Northern Canada Supply Co.,
Cobalt, Ont.

Cochrane Hardware Ltd.,
Sault Ste. Marie,
Sudbury,
North Bay, Ont.

J. Darch & Sons,
London, Ont.

Rice Lewis & Son,
Toronto, Ont.

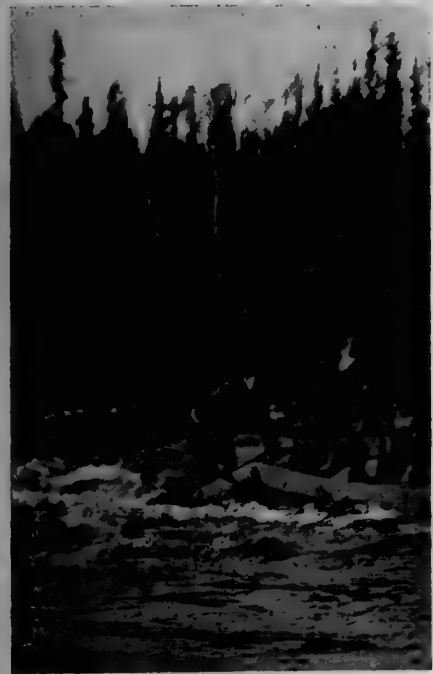


Photo taken by employee of Laurentide Co. Ltd., Grand Mere, P. Q. Their Supt., Forestry Division, states canoe damaged in Rapids, canvas held, braced up canoe and continued journey down St. Maurice River 70 miles. Used canoe balance of season and all following year.

F. M. DIXON

Canadian Representative

Beardmore Building

MONTREAL

Provide for the Future

NOW!

In every lumber manufacturing section of North America are to be found crumbling ruins of mills whose owners elected to depend on the open market for their log supply, who refused to invest their good money in standing timber.

In practically every case the "Open Market" has proven an unreliable source of log supply. Farseeing operators have come in, sized up the supply of timber tributary to certain points and bought the bulk of it. Many of the mill owners who had the first and the best opportunity to purchase, because of their neglect, have been forced out of business and have seen their investment in plant and equipment depreciate to the extreme low limit of its value as junk.

Does that possibility confront you?

If it does, please bear in mind these facts:

Now is the time to provide for your future supply.

We can give you exactly what you need.

Your copy of "Washington Red Cedar, America's Overcoat Wood," Lumber Users Guide No. 12 awaits your request. Send for it.

James D. Lacey & Company

Timber Land Factors

Chicago, Ill., 1750 McCormick Building
Portland, Ore., 1313 Northwestern Bank Bldg.
Seattle, Wash., 1009 White Building

Lumber Camp Ranges and Heaters

Our stoves are specially designed to meet all requirements of camp work.

We know exactly what is necessary and desirable in this class of stove.

We put into all our stoves the best of material and workmanship coupled with the best of expert experience.

The 'Leader Range' for coal and wood, shown in this cut is specially adapted to Lumberman Camps, Boarding Houses, Hotels and Railroad Construction Camp Work. We also make this Range with side hinge doors.

It is large, heavy and strongly built. Has good oven space and large heating surface. When a good, solid, reliable stove is wanted the 'Leader' will give satisfaction.

Write for our catalogue.

All Kinds of Stoves for Large or Small Camps

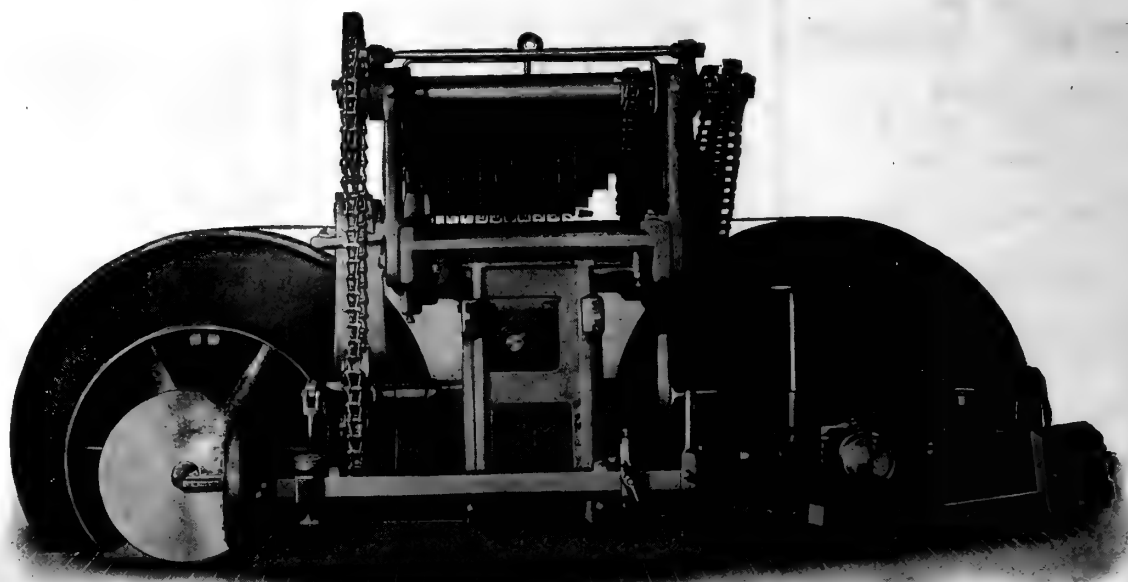


NO. 10-36A SIX HOLE LEADER RANGE AND RESERVOIR

ADAM HALL, Limited

Peterborough, Ontario

Manufacturers of Ranges, Heaters, etc., for Lumber Camps, Hotels, and Railway Construction



Horizontal Slab Re-Saw

A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

KEEP THE WORK GOING



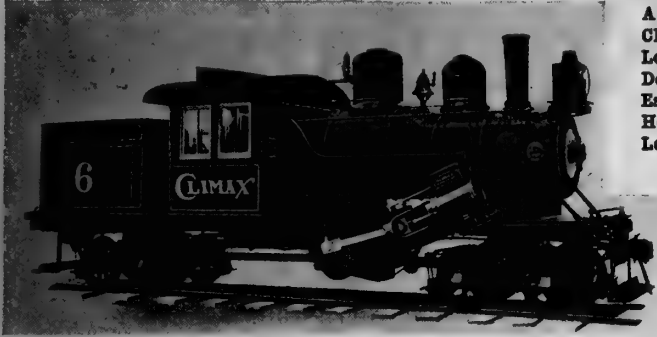
Nothing is more important in logging than the prompt and certain movement of cars.

Delays affect the whole work. To avoid delays, locomotives must be reliable and always ready for service.

Our standard logging locomotives are built to insure reliability and constant service. Only tested materials are used in their construction. All wearing parts are made to templates and gauges. Interchangeability of like parts is guaranteed, and long delays waiting for duplicate parts avoided.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**A Reliable Engine in the Woods**

In logging operations the scene of activity is often many miles from repair facilities so the wise lumberman will appreciate the importance of a reliable locomotive. Our locomotives are built with this fact in view. They are sturdily and simply constructed and will give continual service all the year round.

Logging and industrial locomotives are a specialty with us. We are prepared to construct any special types or submit specifications.

If you are in the market we will be pleased to hear from you.

Canadian Locomotive Company, Limited, Kingston, Ont.

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.



Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

New Ontario Colonization Co.

LIMITED

**Lands, Lumber, Lath and Pulpwood
Planing Mill Work**

Clay Belt Lands for Sale

Located in

Townships of Kendry and Haggart, District of Temiskaming, Ontario

We have the following on hand ready for shipment:

1 x 4	Merchantable Spruce
1 x 5	" "
1 x 6	" "
1 x 7	" "
1 x 8	" "
1 x 9	" "
1 x 10	" "
1 x 12	" "
2 x 4	" "
4/4 and 8/4	Mill Run Tamarack
4/4	Balsam
4/4	No. 2 and Better Whitewood
8/4	No. 2 and Better Whitewood
4/4	Mill Run Poplar

Mills:

JACKSONBORO, ONT.

Sales Office:

**New York Telephone Bldg.
BUFFALO, N. Y.**

Timber Concessions in the Province of Quebec

Notice is given by the government of the Province of Quebec that, on the 11th of August and on the 20th of October, 1914, permits to cut timber on over 8,000 square miles of Crown Lands will be offered at public auction.

The territory to be disposed of comprises some 1,200 square miles in the basins of rivers Ottawa, Harricana and Bell, in the Abitibi region; 6,000 square miles in the Lake St. John northern region; 350 square miles in the Lake St. John East agency; 242 square miles in the Matapedia division.

On the first date above mentioned, permits will be offered at ordinary conditions on some 3,000 square miles.

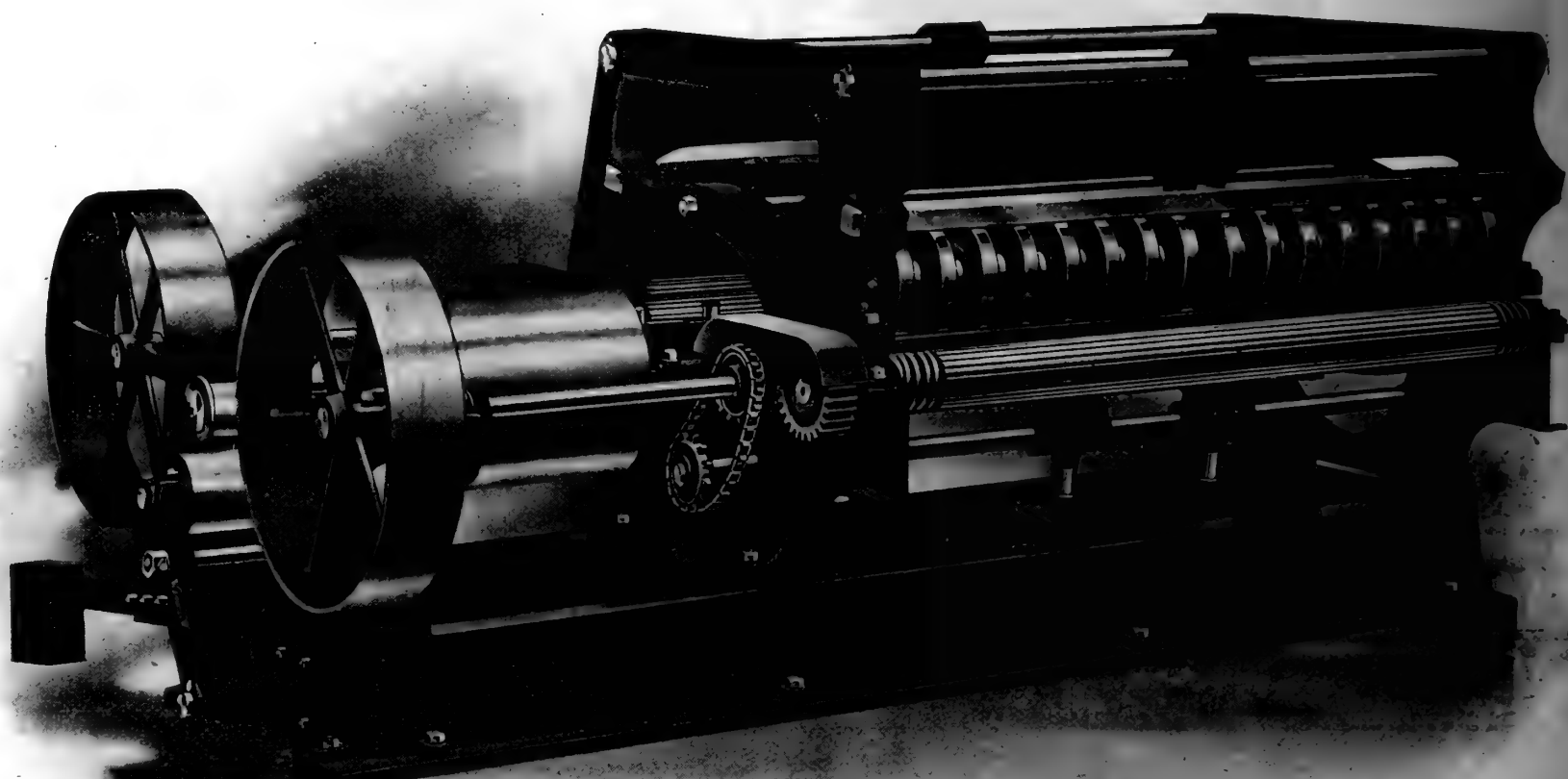
The timber grants advertised for the 20th of October, comprising the basins of three large rivers in the Lake St. John region with considerable water powers, will be subject to the obligation of manufacturing the wood into pulp or paper within the Province of Quebec.

For particulars, please apply to the Department of Lands and Forests, Quebec, Canada.

Elz. Miville Dechene,

Deputy Minister of Lands & Forests.

Quebec, 11th April, 1914.

The Mark*of Quality*

DUTY

HEAVY DUTY EDGERS

Built in 54 inch to 84 inch sizes.

We have a high grade, dependable machine to suit your special needs.

For cuts, quotations and free advice of our engineering department, do not hesitate to write us.

See Additional Advertisement Page 67

The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver

Gorman, Clancey & Grindley, Calgary and Edmonton

Represented by:

Stuart Machinery Co., Ltd., Winnipeg

Williams & Wilson Ltd., Montreal

Waterous Engines

Continuous Service with Little Attention



Make your choice of an Engine for the Sawmill the Waterous Side Crank Sawmill Engine. It is built for the work. With strength and simplicity it combines the ability to be on the job all the time

There is nothing to get out of order. Parts are few, are sturdily built of the best of materials, and are easily gotten at for oiling and overhauling : : : : :

Give it an occasional wipe-down and a dose of oil on the wearing surfaces, and the engine will run from whistle to whistle without a hitch : : : : :

We build both Single and Twin Engines of this type in sizes up to 600 H.P. If you want an engine that will give you absolutely reliable service under all sorts of conditions ask us for Catalogue and Prices : :

*Remember we furnish Power Plants complete in all sizes, and have made a specialty of Sawmill installations : : : : :
Any Information we can give you is yours on request : : :*

THE WATEROUS ENGINE WORKS CO., LTD.

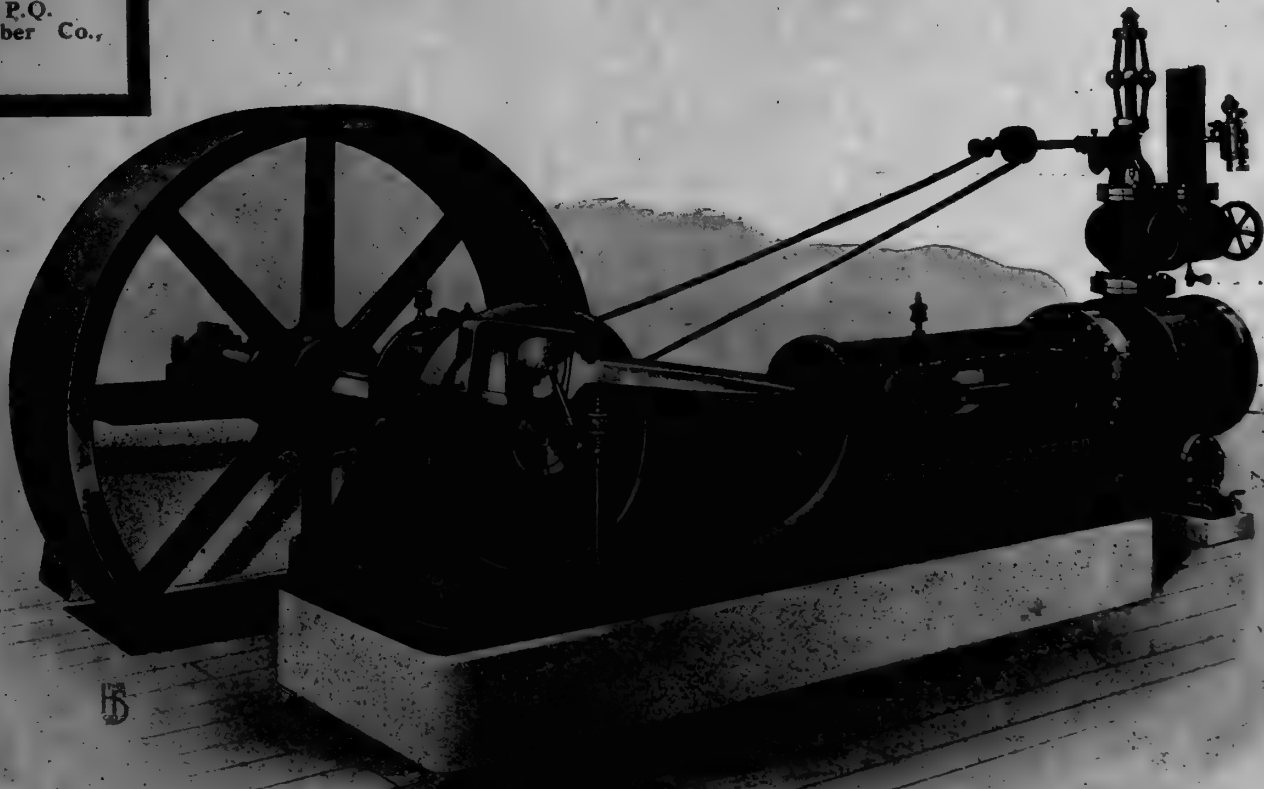
H. B. Gilmour,
Vancouver, B.C.

Brantford, Canada

Winnipeg, Man.

Ask these Users About Them

St. Maurice Lumber Co., Three Rivers, P.Q.
Robert McNair Shingle Co., Ltd., Port Moody, B.C.
Carney and Benzie, Salmo, B.C.
St. Lawrence Pulp and Lumber Co., Chandler, P.Q.
Thompson Lumber Co., Kamloops, B.C.
Bridges Lumber Co., Fort George, B.C.
Summit Lake Lumber Co., Summit Lake, B.C.
Monarch Lumber Co., Savona, B.C.
John Breaky, Breakyville, P.Q.
Crows Nest Pass Lumber Co., Wardner, B.C.





"FROST KING" METAL

\$5,000,000.00

worth of mixed metal
sold annually.

Our thirty five years experience in metal mixing enables us to place on the market a rabbit that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

BATTS LIMITED

WEST TORONTO

MANUFACTURERS OF

Staved Columns
Veneered Doors
Newel Posts
Sashes - Flooring
Trim
Pine Doors and
Frames
Turned Newel Posts and
Balusters
Cypress Greenhouse
Material

BATTS LIMITED

MANUFACTURERS

WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
KNOWN
OUR
"EXTRA"



MONTREAL
WINNIPEG

TORONTO
VANCOUVER

The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL



BOILERS

"INGLIS" boilers are the product of over 50 years' experience and study combined with the most modern equipment for boiler making.

"INGLIS" boilers are made in every type and all sizes.

Let us quote on your requirements.

The John Inglis Co., Ltd.

Engineers and Boilermakers

14 Strachan Ave. Toronto, Canada

Montreal Representative—A. Angstrom,
509 Canadian Express Building

Canada Lumberman

Worker

Time is Money

The rapid cutting File is the economical File

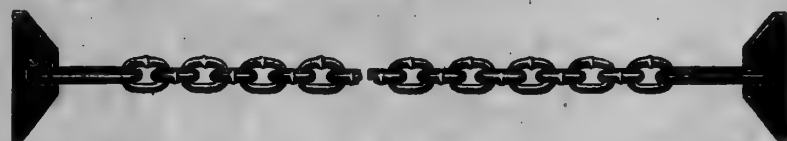
Files Branded

American - Arcade - Eagle - Great Western
Globe - Kearney & Foot - McClellan - J. B. Smith

are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



Electric-Welded Boom Chain

25% {More Weld} = 25% {More Strength} = 25% {More Wear}

Sheared Toggle and Ring * T Bar Hook and Link * Two Sheared Toggles * Forged Toggle and Ring

Made in Canada

Write to

Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

AROUND THE WORLD

In addition to its success in this country, Dick's Balata Belting is doing notable transmission service in every country on the globe. It is manufactured in Glasgow, has been on the market over 25 years, and has an unbeaten record for long service in hard places.

We are the exclusive Canadian Agents for Dick's Balata Belting.

For further details write for Catalog No. 17.

DICK'S Balata Belting Leather Belting Wood Split Pulleys Shafting Hangers Iron Pulleys
Steel Pulleys Saw Mill Supplies Clutches Babbitt Wood-Working Machinery Steam Goods

THE CANADIAN FAIRBANKS-MORSE CO., LIMITED

Fairbanks Scales
Montreal Toronto

Fairbanks-Morse Gas Engines
St. John, N. B. Winnipeg

Safes and Vaults
Calgary Vancouver



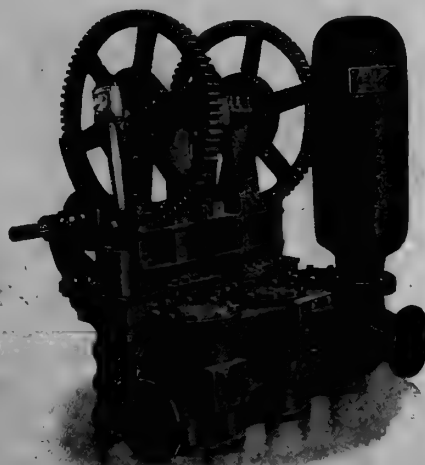
F. REDDAWAY & CO., MONTREAL, Sole Makers of



THE BELT YOU WILL EVENTUALLY USE

We guarantee our "Camel Hair" Belting will outlast, transmit more power, prove easier on bearings, stretch less than any other class of belting running under same conditions, and if our claims are not borne out by results, we are ready at all times to make any rebate on the cost of our belt that will make it cost no more than any other style of belting. Service considered.

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER



OUR first aim is to please our customers. Why not give us a trial when next in the market for Pumping Machinery?

The Smart-Turner Machine Co.

Limited

Hamilton - Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwt. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

B. J. COGHLIN CO., Limited

WRITE FOR PARTICULARS

MONTREAL

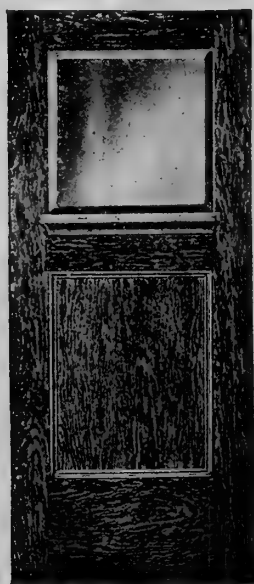
Midland Planing Mill Products

THE LEADING STOCK LINES

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition? The up-to-date dealer who carries a stock of Hardwood Veneered Front Doors, wants the widest possible range of designs, but is always hampered for room.

Here are three designs of Veneered Doors and four designs of Midland Interchangeable Sash.



Door No. 612



Sash A



Door No. 79



Sash C



Sash B



Sash D



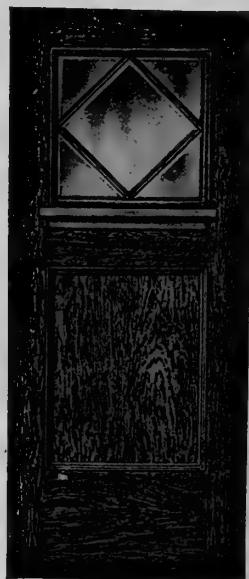
Door No. 81

These doors and sash are all you require to carry. Each door will make up into five different designs. The sash are easily fitted, just as easy as a pane of glass, and are **interchangeable**. The same piece will fit each of the different designs. You will require additional sets for each additional sized door you carry in stock.

See our new door catalogue "Midland Doors" for full information and prices.



And
this
is
what
they
look
like.



Door No. 613



Door No. 615



Door No. 82



Door No. 83

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition?

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company
CACHE BAY Limited - - ONTARIO

Manufacturers of

**Lumber, Lath and
Dimension Timber
Planing Mill
Dry Kiln**

See Us First

Now that spring has arrived, do not forget when buying, that we have
a full assortment of

White Pine, Norway & Spruce

JAMES G. CANE & CO.

411 McKinnon Building, TORONTO, Ont.

Yellow Pine Timber

And Lumber Rough or Dressed
Car Material and Long Timbers
a Specialty

PROMPT SHIPMENTS

E. C. BRADLEY LUMBER CO.

Lisman,
Ala.

and

Cincinnati,
Ohio

President and General Manager Assistant General Manager
D. C. CAMERON, Winnipeg Wm. ROBERTSON, Vancouver
Secretary-Treasurer, WILSON BELL, Winnipeg

The Rat Portage Lumber Co. Ltd.

Manufacturers of

Fir, Cedar and Spruce

LUMBER

Cedar Shingles, Fir and Cedar Lath

Car Sills and Sheathing, Cedar Siding

Large and Long Timbers
for heavy construction work

Vancouver, B.C., and Harrison River, B.C.

T. H. Garrett Lumber Co.

Manufacturers of **YELLOW PINE LUMBER**

Mills:—

Selma, La.
Jena, La.
Melton, La.
Waukegan, Tex.
Buena Vista, Ark.

Long Leaf Timbers,
Short Leaf Finish
and
Railroad Material

Send your inquiries and orders to:—

General Sales Office

Suite, 1220 Chemical Building, ST. LOUIS, Mo.



Spruce
White Pine
Banksian Pine
Birch

Get our stock list and prices.



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140,000'	1 x 12,	No. 1 Mill Culls
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Selects
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within a few
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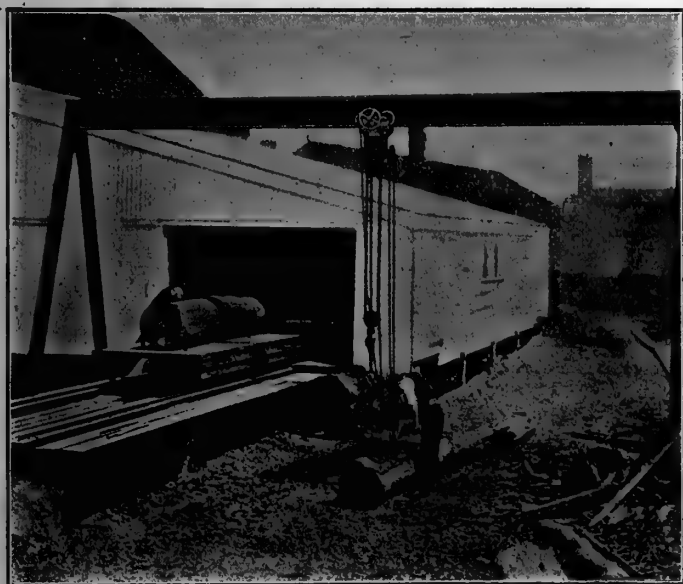
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The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the Town of Parry Sound, Ont.; and other Lumber Equipment, including boom chains, plows, sleighs, etc.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

We have the following Sawmill Machinery for sale:

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| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |
| | 2 Double Duplex, high pressure Water Pumps. |
| | 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam. |
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| | 1 Upright Engine for sawdust conveyor. |
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| | 1 Mitts & Merrell Hog. |
| | 1 Wood Machine for 22-in. wood. |
| | 1 Wood Machine for 16-in. wood. |
| | 1 Edger for ripping dry lumber, installed. |
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| | 1 30 h.p. Generator, 250 volt. |
| | 1 30 light arc generator. |

POWER PLANT

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

Also, contents of machine shop, containing Planer, Drill, Lathe and Machinery, with tools necessary for repair work.

All of the above open for inspection at Parry Sound.

FILING ROOM

- 1 Automatic Filing Machine for 12-in. D.C. band saws.
- 1 Automatic Grinding Machine for 8-in. S.C. band saws.

The
Parry Sound Lumber Co.

26 Ernest Avenue, TORONTO, CANADA

Limited

HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK
POPLAR ASH

Yards at Nashville, Tenn.

We can ship you promptly any of the above
Stock, Carefully Inspected

WE WOULD LIKE TO HEAR FROM YOU

Wistar Underhill & Nixon

Real Estate Trust Bldg., Philadelphia, Pa.

Canadian Representative:

G. H. Johnson, 125 Tyndall Avenue, Phone Parkdale 736, Toronto, Ontario

Hoffman Brothers Company

Fort Wayne, Indiana

Manufacturers of Hardwoods—Any Thickness From

1/30" SLICE CUT VENEER

1/20" SAWED VENEER

to

2" BAND SAWED LUMBER

Specialty:

QUARTERED WHITE OAK

Service First

20,000,000 feet Dry Hardwoods for immediate
Shipment.

OUR SPECIAL LIST

- 1 car 1 x 6 in. firsts and seconds Basswood.
- 2 cars 1 x 6 to 8 in. firsts and seconds Basswood.
- 1 car 1 x 12 in. and wider firsts and seconds Basswood.
- 1 car 1 x 5 and 6 in. No. 1 Common Basswood.
- 1 car 1 x 7 in. and wider No. 1 Common Basswood.
- 1 car 1 x 8 in. and wider No. 1 Common Basswood.
- 2 cars 1 x 6 in. and wider firsts and seconds Beech.
- 2 cars 1 x 6 in. and wider No. 1 Common Beech.
- 1 car 5/8 in. No. 2 Common and Better Beech.
- 2 cars 1 x 6 in. and wider No. 1 Common Birch.
- 1 car 1 x 6 in. and wider No. 2 Common Birch.
- 2 cars 8/4 No. 1 Common and Better Soft Gray Elm.
- 3 cars 12/4 No. 1 Common and Better Soft Gray Elm.
- 1 car 16/4 No. 1 Common and Better Soft Gray Elm.

The Stearns Salt & Lumber Co.

Ludington, Michigan

W.M. RITTER LUMBER COMPANY

Below is a list of Dry Lumber
which we can Ship Promptly

POPLAR:

- 4/4 Panel and No. 1, 18 to 19 in., one car.
- 4/4 Panel and No. 1, 20 to 21 in., one car.
- 4/4 Panel and No. 1, 24 to 27 in., two cars.
- 4/4 1sts and 2nds, 7 to 17 in., four cars.
- 10/4 1sts and 2nds, 7 to 17 in., one car.
- 16/4 1sts and 2nds, 7 to 17 in., one car.

CHESTNUT:

- 4/4 1sts and 2nds, 1 face 6 and up, two cars.
- 4/4 No. 1 Common, 3 cars.
- 6/4 Sound Wormy, 3 cars.
- 8/4 Sound Wormy, 3 cars.

OAK:

- 5/4 1sts and 2nds, 6 and up, 3 cars.
- 6/4 1sts and 2nds, 6 and up, 4 cars.
- 7/4 1sts and 2nds, 6 and up, 3 cars.
- 4/4 No. 1 Common, 6 cars.
- 6/4 No. 1 Common, 3 cars.
- 7/4 No. 1 Common, 2 cars.
- 8/4 No. 1 Common, 2 cars.

RED OAK:

- 4/4 No. 1 Common, 3 cars.
- 5/4 No. 1 Common, 1 car.
- 6/4 No. 1 Common, 1 car.
- 8/4 No. 1 Common, 1 car.

The above is a list of dry lumber which we can ship promptly.
All our own manufacture, band sawed, and thoroughly seasoned. Do not place your order before writing for prices.

Canadian Representative:

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Phone Parkdale 3222

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MANUFACTURERS OF BAND-SAWED

OLD-FASHIONED SOFT

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KENTUCKY

HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

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Manufacturers, Wholesalers and Exporters of High Grade

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15,000,000 ft. on hand at all times of dry Plain & Quartered W. and Red Oak, Poplar, Ash, Hickory, Gum and other Hardwoods.

Quick shipments direct from our own mills and yards.

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Write for prices.

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Toronto, Canada

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Mills at—

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Full assortment of grades and thicknesses in Quartered and Plain Oak, Gum, Poplar and other Hardwoods in our Jamestown yards.

STRAIGHT OR MIXED CARS.

IMMEDIATE SHIPMENTS.

Redwood

HUMBOLDT

AIR-DRIED

Pattern Lumber
Free from pitch
Easily worked
No Shrinkage

Has been used by
PATTERN MAKERS
on the Pacific Coast for Fifty years.

Canada Lumber Sales Co., Limited

Dominion Express Building, 145 St. James St.

Montreal, Canada

The Redwood Pioneers of Canada

For Immediate Shipment

15,000 ft. of 3" No. 1 C. & B. Maple
25,000 ft. of 1" No. 1 C. & B. Maple
12,000 ft. of 2" No. 1 C. & B. Maple
50,000 ft. of 2" E. I. C. & B. Dry Birch

Best Quality and Bone Dry

Sawn in 1911 and 1912 and shipped according to the
rules of the National Hardwood Lumber Association.

Glengarry Lumber Company, Limited

BERLIN :: ONT.

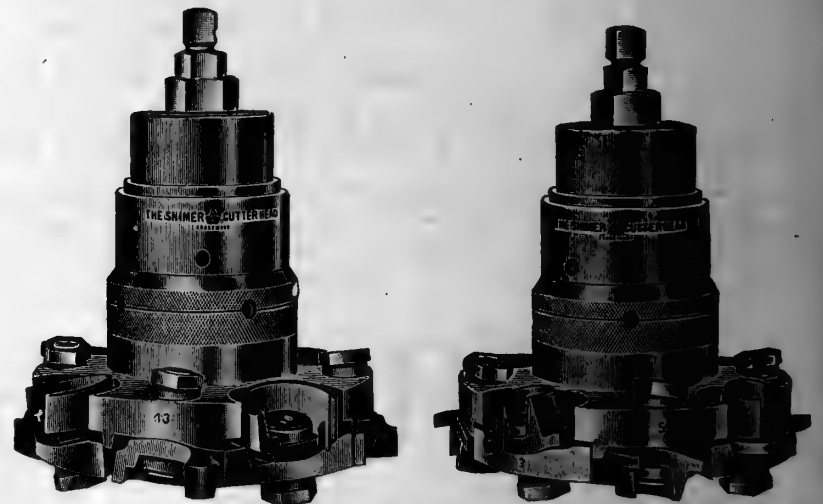
Save All The Hand Fitting!

Use Shimer Cutter Heads in which the Bits are simply filed or ground to sharpen and set to a gauge—no more trouble than filing a saw. They eliminate hand fitting and make the men and machines so efficient that a quality product can be turned out in paying quantities. They save time, save labor, save material—do away with the fitting, trying and other annoyances, and cut so easily and clean that power is also saved. They maintain uniform patterns because the shape of the pattern is turned into the long-life Circular Bits and never changes when the Bits are sharpened.

Shimer Cutter Heads are provided with the latest developments in the art of reducing friction and wear on the knives. The Bits are bolted to Conical Duplex Bit Seats to secure perfect point and edge clearance. Working in pairs and in upper and lower series upon the Head, they divide the cut in a shearing manner, lessening the tendency to pull out knots and splinters on hard and cross-grained lumber.

The edge outline of the Bit only comes in contact with the lumber and shapes it accurately. As the cutters are filed or ground to shape on the inside of the circle the shape never changes. All that portion of the cutting edge is brought into service as the cutter is sharpened and brought around upon its holding bolt to again fit the gauge.

There's a Shimer Cutter Head for every kind of matching and moulding service. If you will state your conditions and give us measurements of your machine we will send you the proper tools on free trial. Write us today.



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FOR THE HIGH SPEED MATCHER

These Heads have a chucking device which self-centers them on the spindle and grips firmly thereto when the device is drawn up, overcoming the objectionable set screw as a means of fastening the Head to the spindle. It is reliable and practically perfect in results.

The Bits carry a larger areal surface and the Bit chambers are of greater depth to compensate for the new chisel point given to the Bits for greater relief to the parts coming into contact with the lumber.

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Price, net, for Flooring, \$72.46 the set complete.

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Dandy Rolls and Cylinder Molds

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Galt Knife Company, Limited

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Fir Casing, Base, Interior Finish and Mouldings

RED CEDAR SHINGLES

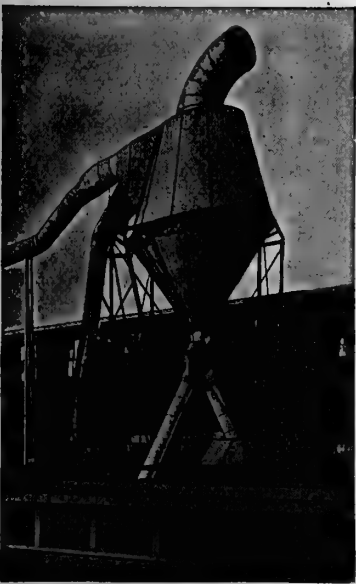
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A dust collector on one of our large Canadian factories. This entire system was put in by us a few months ago.

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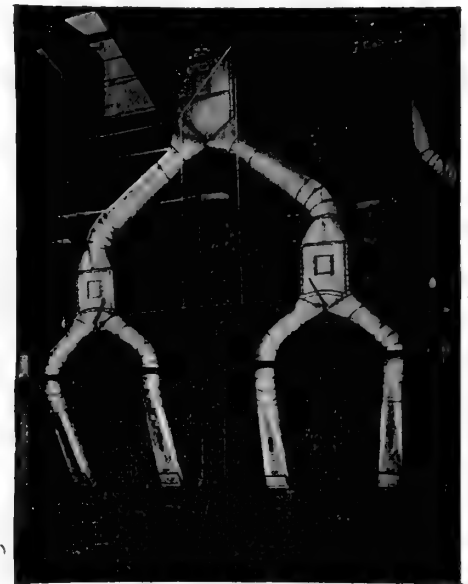
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New Systems designed to Fit Your Present and Future Requirements.

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*Our installations are good investments
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The Boiler Feeders of the same system illustrated on the other side of the page.

The A. B. Ormsby Co., Limited, Winnipeg, Toronto

Associated with The Metal Shingle & Siding Co., Limited, Consolidated Factories at Preston
Blow Pipe Department Montreal Saskatoon Calgary

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RUSSEL LOGGING CARS

Mr. Lumberman



It's the Russel Car you will be interested in. The Russel Car is unsurpassed in quality, service and capacity.

Built for any capacity and to accommodate any length of log desired.

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Massee & Felton Lumber Co.

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Mills: MACON, GEORGIA

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4/4 1st and 2nd	60,000
4/4 No. 1 Common	135,000
5/4 No. 1 Common	15,000
4/4 1st and 2nd Figured	30,000
4/4 No. 1 Common Figured	30,000

PLAIN RED GUM

3/8 1st and 2nd	13,000
1/2 1st and 2nd	15,000
5/8 1st and 2nd	20,000
4/4 1st and 2nd	400,000
5/4 1st and 2nd	3,500
4/4 No. 1 Common Red	17,000
5/8 No. 1 Common Red	15,000
4/4 No. 1 Common Red	340,000
5/4 No. 1 Common Red	19,000
6/4 No. 1 Common Red	17,000

SAP GUM

3/4 1st and 2nd Sap	10,000
4/4 1st and 2nd Sap	60,000
5/4 1st and 2nd Sap	9,000
6/4 1st and 2nd Sap	50,000
8/4 1st and 2nd Sap	11,000
4/4 18-in. and up panel	20,000
5/8 No. 1 Common Sap	6,000
3/4 No. 1 Common Sap	19,000
4/4 No. 1 Common Sap	110,000
5/4 No. 1 Common Sap	28,000
6/4 No. 1 Common Sap	70,000
8/4 No. 1 Common Sap	12,000

3/8 No. 2 Common	3,500
1/2 No. 2 Common	6,500
5/8 No. 2 Common	3,000
3/4 No. 2 Common	14,000
4/4 No. 2 Common	450,000
5/4 No. 2 Common	4,000
6/4 No. 2 Common	7,000
4/4 No. 3 Common	200,000
5/4 No. 3 Common	6,000

MISCELLANEOUS

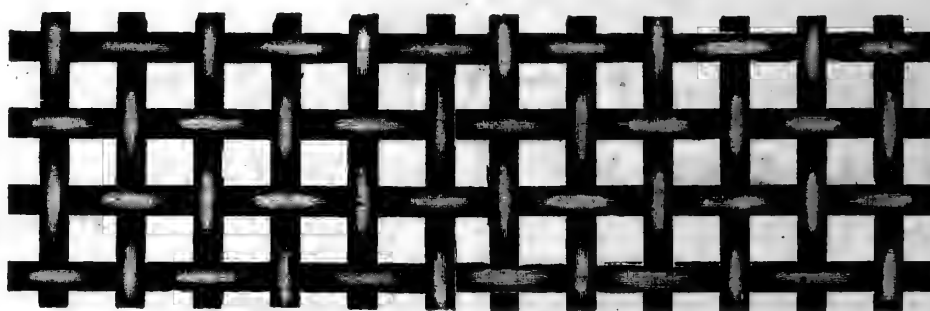
8/4 No. 1 Common and Better Hickory	25,000
6/4 Log Run Elm	43,000
4/4 Log Run Cypress	15,000
6/4 No. 1 Common Cypress	3,500
8/4 No. 1 Common Cypress	2,000
4/4 Log Run Beech	55,000
4/4 Log Run Sycamore	52,000
5/5 and 6/4 Log Run Persimmon	12,000
4/4 No. 1 Common Ash	20,000
6/4 No. 2 and 3 Common Ash	24,000

PLAIN OAK

1/2 1st and 2nd	4,500
3/4 1st and 2nd	7,500
1/2 No. 1 Common White	6,000
3/4 No. 1 Common White	7,500
4/4 No. 1 Common White	60,000
5/4 No. 1 Common White	2,400
4/4 No. 1 Quartered W. O.	17,000
4/4 1st and 2nd Red Oak	9,000
4/4 No. 1 Common Quartered Red Oak	17,000

Ready for Prompt Shipment

Steel Wire Cloth



For

Refuse Burners

Write for sample and full particulars.

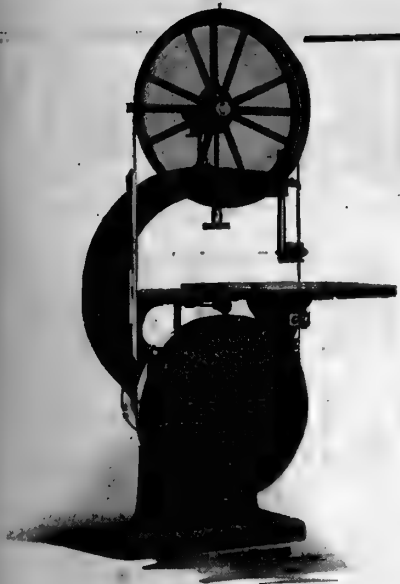
Alligator Ropes

Sawmill Carriage Ropes

THE B. GREENING WIRE CO., LIMITED

Hamilton, Ont.

Montreal, Que.



28" Band Sawing Machine

Every Woodworker is Interested in a Band Saw, But there are few Band Saws that interest every Woodworker. Here, however, is one that will, and this is why:

It bears the name "Defiance" which is a guarantee that it is a well built and accurately fitted machine, up-to-date in every particular. The wheels are 28-in. in diameter by 1½-in. face, covered with pure rubber bands; they are given a true running balance and are supported upon ground steel spindles running in long self-lubricating bronze bearings. The lower wheel is of the solid web type covered with metal shield, while the upper wheel is covered with a screen shield or safety guard. The table is 24-in. x 28-in. and will tilt to an angle of 45 degrees; an ingenious spring tension device automatically regulates the tension on the saw blade and non-friction guides are used both above and below the table. This machine will take stock 12-in. thick and under and is furnished complete with brazing tongs and vise.

The Defiance Machine Works, Defiance, Ohio, U. S. A.

Solid and Inserted Tooth Circular Saws

We make a specialty of these lines

We remake old Solid Tooth Saws into new Inserted Tooth Saws

Write to us for quotations.

Our saws have been before the public of Canada since 1855, and have won a reputation far excelling any other make of saws, combining as they do so many points of marked superiority.

By the old method the tempering of circular saws was to a great extent a matter of chance.

By our Patent Process that uncertainty is entirely avoided.

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We are prepared to make prompt deliveries of all Saw Orders—Rush Orders by mail or wire receive immediate attention.

R. H. Smith Co., Limited

Saw Manufacturers,
ST. CATHARINES, ONT.

Pink's Lumbering Tools

The Standard Tools



Finest Quality

Split Maple

Cant Hook and

Peavey Handles

Carload or dozen

Boom Chains

Pike Poles

Skidding Tongues

Boat Winches, etc.

Agents for Brazil Patent Snow Plow. Manufactured by Bateman-Wilkinson Co. Ltd. Toronto

Send for Catalogue and Price List

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants

Thos. Pink Co., Limited, Pembroke, Ont.



For the Money You Pay **SIMONDS SAWS** Give You Better Value

Almost any *new* saw will cut good lumber.

But—You have got to wear a saw out to find out what its real value is.

And it's in *real value* as well as *new* value that Simonds Saws excel all other makes.

Simonds Canada Saw Company, Limited

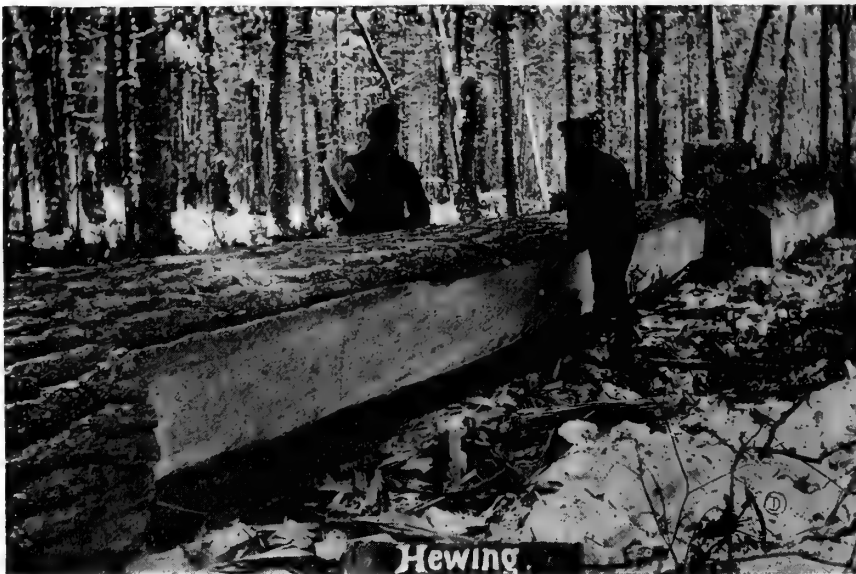
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MONTREAL, QUE.

ST. JOHN, N. B.

ONTARIO *Canada's Banner Province*



Ontario's timber production last year valued at \$26,774,937 or 40% of Canada's total output.

Pine production, 905,442,000 ft. B.M.

Pulpwood, 246,282 cords.

Railway Ties, 5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.

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HON. W. H. HEARST,

Minister of Lands, Forests and Mines.

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, May 15, 1914

No. 10

The Traveller's Strongest Argument

There is no hard and fast rule for regulating the number of times when a wholesaler or manufacturer should call upon his customers. If there were any such rule, it would probably be broken more often than any other rule that we know of. Nevertheless, one of the most important matters connected with the successful management of a wholesaling or manufacturing business has to do with this question. The most successful man in the business of selling lumber is one who combines the ability to make himself welcome and the ability to regulate his calls in such a way as not to miss any important chance of securing an order.

There is no doubt that the consuming trade have, many a time, a good excuse for wishing that fewer travellers would call upon them, or that those who do call would do so less frequently. Everyone who has had experience as a lumber traveller knows how frequently he has found a line of travellers waiting for an interview with a customer from whom he hoped to take an order. Every consumer of any importance knows how frequently he has devoted a large part of a very busy day to interviews with salesmen, when he could have employed his time much more profitably. And every traveller, no matter how successful he may be, knows, to his sorrow, of a few occasions at least when he has just missed a juicy order which he might have had if he had been on the spot a little sooner. Some people will say that this is simply a matter of the survival of the fittest and that it makes little difference, one way or the other, because in the end the business is transacted and the stocks are moved, and the best man with the best stock gets the best results.

But is this really the case? Is it not often the fact that the man who gets the order does so by chance? It is his lucky day perhaps; perhaps also it is the customer's unlucky day, if he only knew it. He might get the stock or even better stock at a price which would be more profitable to him. Then again, the consumer cannot help feel-

ing many a time that there should be some way of regulating the visits of the salesmen so as not to involve the consumption of so much valuable time in interviews which cannot result in business. And the salesman; what about his side of the case? Does he not feel many a time, that if he could only get out of the calls which result in nothing, he could show far better results?

Nowadays, when business conditions are slack, this question comes up for more discussion than it did a year and a half ago. Then, a traveller did not mind a few hours spent upon a profitless visit, because he felt pretty certain that he would soon run down some exceptionally good orders which would more than bring up his average. But to-day, the shoe pinches badly, and the profits of the firm grow continually smaller, in proportion to the number of calls which one pays upon firms where no business is to be had. It is just under conditions of this nature that the real lumber salesman is borne, and the mere order taker is shown up.

To-day, when orders are few and salesmen are many, the man who keeps incessantly before his customer the fact that real value is what he should consider, not simply price, and who shows the customer that he can give him such value, both in stock and in service, is the man who is most likely to win. The "value" argument is one which will carry more weight to-day than any other. Large and important consumers know very distinctly just what their trade requires and are in a position to appreciate the importance of getting, for their money, a class of stock which will work up most advantageously. It happens often, that the salesman is told his prices are too high, and that, by taking the trouble to explain the quality of his stock, he can show the consumer that in reality this price is lower than the price of the stock which the consumer has been buying for some time; stock which probably involved so large a percentage of waste as to make it actually more expensive than the high-priced stock of high quality.

These questions of value and price are rather everyday matters to experienced salesmen and to the ordinary buying consumer. We would not discuss them here, were it not for the fact that they involve questions which never seem to be settled. They are disposed of perhaps for a time or for a particular consumer, but they crop up again in a new locality or a little later on, when new business conditions arise. It is strange how often a consumer or a salesman settles all these questions in his own mind without putting his conclusions into practice. There is something about the coming together of a salesman and a customer which often upsets all theories. The moment they commence to discuss a question of buying or selling, some strong currents of thought seem to come into play, which obliterate, for the time being, all those well worked out theories to which they have each devoted so much time. In good times, lumber selling, or buying, is much more a matter of simple business contract than it is when times are dull. Then it becomes a psychological study—a scientific exercise of all the skill acquired from long experience.

Every year sees changes in the methods of doing business. There was a time, not so very long ago, when much of the lumber selling business was conducted upon a plan which meant large sales at regular, but lengthy intervals. The last few years have seen this changed into a system of frequent purchases of smaller quantities, involving much more frequent calls upon customers. A few years ago, one heard only occasionally of the "hand-to-mouth" policy of the consumer. To-day, it seems as though every consumer of lumber was doing business upon this basis only. The amount of personal canvassing which the trade requires to-day, seems out of all proportion to that which existed a few years ago. We hear it said to-day, however, as we did then, that there are too many salesmen and that the trade is "over-solicited." Perhaps, in a few years time, when competition has become still keener and business more microscopic, we will look back upon the present as a time when things were more leisurely, and when the trade was not solicited too frequently.

In the light of the past, and with the experience of to-day to guide, it seems as though "over-solicitation" is not the cause, but simply one of the results of some more deeply seated evil. If we go far enough

back we will come to something which is much more like a cause than an effect; namely, "lack of salesmanship" in the widest sense of the term. "Lack of salesmanship" does not simply mean inability to approach a customer in such a way as to get upon his good side and take his signature to an order. It means really something far more vital, in connection with the successful work of a salesman. It means in the first place lack of appreciation of the other man's point of view, and in the second place lack of appreciation of one's own opportunities. Every man who takes an order for stock in regard to which there exists a possibility that the consumer will be disappointed, or will have reason to feel that he might have done better, is falling short of his possibilities as a salesman. The first consideration in selling lumber should be, to give the customer such value that, upon the next occasion when he requires stock, he will be prejudiced in favor of the firm

from whom he has already purchased. There can be no two ways about this. Its force is greater in dull times than in good. It applies to-day more than it ever did before.

There may be too many men upon the road to-day offering lumber for sale, but that is not the trouble. The real trouble is that there are many men upon the road seeking to take orders instead of seeking to give value. The root of the evil is right here. The number of times that a customer should be visited is an important matter, but it has nothing like the same importance as the giving of value. In fact, giving value will go a long way toward solving the problem of how often a customer should be called upon. The salesman who gives value will find in many cases that it is his strongest argument, and upon subsequent occasions when there is business to be had, it will seek him, instead of it being necessary for him to seek the business.

Dry Rot Causes Expensive Lawsuit

A most interesting and important judgment has been given in Montreal by Mr. Justice Panneton in the case of the Canadian Spool and Cotton Company against Peter Lyall and Sons and Messrs. Brown and Vallance, architects. The question at issue was one involving the use of timbers in a mill building. After the building had been in use for about a year, dry rot commenced to set in in some of the timbers and the owners replaced them with steel. Then they brought suit against the contractors and the architects. The result is a judgment in their favor against the contractors for \$71,120.85, while the architects are jointly and severally condemned with the contractors in the sum of \$67,022.12. According to the reports of the case which are now available, the contractors, according to the specifications, undertook to supply "all timber, Georgia pine, long leaf straight grain and free from knots." That they did not do so except in the case of very small quantities was admitted and proved. The reason given was that it was found impossible to get the required quantities otherwise than at prohibitive prices, as it would have to be picked at different mills. Instead, they had used a good merchantable grade of wood. Mr. Justice Panneton, commenting on this point, remarked that contractors had their own ideas about the fulfilling of a contract, but in the present instance there was a direct breach of contract, the consequences of which the contractors did not anticipate, relying, as they did, upon what in practice was considered as good timber at least for solidity and some other qualities. Unfortunately for them, it did not turn out to have the same resisting ability to the dry rot germs as that required in the specifications. The result was that after they had taken possession and had installed their machinery, plaintiffs had been forced completely to renew and replace the beams throughout the structure with steel. It was expense incurred in this operation

that went to make up the claim which, as presented, totalled \$91,000.

His Lordship in giving judgment said: "Defendants Brown and Vallance merely deny the main facts of plaintiffs' declaration and say that dry rot was due to causes over which they had no control and for which they are not responsible. But they further urge and offer for their defense that plaintiffs allege that the building was never finally accepted by them, and that fact being alleged they say that under the Civil Code, plaintiffs have no right of action, as the building was the property of defendants Lyall and Sons.

"That allegation of plaintiffs' declaration is denied by both defendants in their plea. But whether finally accepted or not it does not alter the situation. Defendants Lyall and Sons have allowed plaintiffs to take possession of the building to start their operations therein and the dry rot was discovered only after plaintiffs have been in full possession of the building for nearly one year and defendants Lyall and Sons did not pretend to have anything more to do with the building, and so far as they were concerned the delivery was complete. What plaintiffs did in undertaking to replace wood by steel was an acceptance of the building which would preclude them from finding fault with it for anything for which defendants Lyall and Sons would be responsible otherwise than under article 1688 of the Code. Ten years' liability exists even after delivery and acceptance has been had. When plaintiffs' plant and machinery were all in the building and the works in operation, plaintiffs had to go to work at once to do what was necessary to prevent further damage which would result from allowing the decayed wood to go to pieces and carry down the whole machinery, involving perhaps the loss of life."

It is announced that the case will be forthwith taken to appeal.

The Proper Marketing of Lumber

Whenever any discussion arises in regard to advertising lumber, the editorial department of a lumber trade journal naturally feels inclined to withdraw and leave the discussion entirely in the hands of expert advertising men. The subject is one which, in a large measure, lies definitely outside the field of lumber manufacturing. When it comes to a question of lumber selling however, the situation immediately changes and, inasmuch as the editorial efforts of a lumber trade journal are devoted to publishing information which will assist all who are engaged in the business of producing and distributing lumber, an occasional reference to the subject of advertising is permissible.

These thoughts are suggested by a letter which was recently received from Jas. D. Lacey & Company, Timberland Factors of Chicago, in the course of which some exceptionally forcible points were brought out in connection with the subject of advertising. The firm in question have naturally found advertising in trade journals one of the most direct methods of appealing to their customers and prospective customers, who are peculiarly of the lumber manufacturing class. One of their advertisements, which is well known to most

readers of trade journals, bore the heading "Timber is Cheaper To-day than it was Three Decades Ago."

The strength of this heading attracted the notice of the editor of "Printers' Ink," a journal devoted particularly to discussion of the advertising business. The editor of "Printer' Ink" wrote to Jas. D. Lacey & Company and asked them a number of questions, the chief one being as to the probability of lumber manufacturers becoming extensive advertisers to the consumer. The interesting features of the letter above referred to are contained in the reply sent to this question.

After giving an interesting resume of the lumber manufacturing industry from its earliest days, when the finest white pine trees only produced two or three logs, and any trees with visible defects were discarded, a contrast was drawn with present day methods involving so great an increase in the quantity of lumber secured from an acre of land. "The demand for lumber was constantly broadening," says the letter, "until about ten years ago. At that time substitute materials began to come on the market. A place was made for them by persistent advertising and aggressive sales methods. Lumber manufac-

turers regarded the situation tolerantly. They conceded the possibility of advertising patent roofing, composition shingles, cement, hollow tile, concrete blocks, and all manner of substitutes, and by means of advertising to promote the use of such materials, but their product was something that 'could not be advertised.'

"Furthermore, they did not know and do not know, how to use advertising, or just what the results of advertising should be. They have figured that \$3,000 spent for advertising produces intangible results, whereas \$3,000 spent for a salesman produces tangible orders. They heretofore have sought the salesman instead of the advertising.

"Substitute materials have been used to build dams across outlets for lumber. Instead of new uses opening up and affording new outlets, some of the old ones are being closed up and the result is congestion in distributing markets and original sources of supply.

"It is easy to advertise lumber, because we have proof of its value on every hand. There is no great initial expense of introduction involved, as in the case of new materials. A faint perception of that fact has penetrated the mental orbit of lumbermen and is being given more and more recognition as the days go by.

"Lumbermen have a very keen perception of the value of their product. Unfortunately they have credited the building and home-owning population with similar information. Thirty years ago, when we lived close to the woods and other elementary things, their view was correct, but the forests have been cut away and our surround-

ings largely are man-made. Lumbermen who started in business twenty to thirty years ago are slow to acknowledge the change.

"This new generation 'which knows not Joseph,' must be educated regarding lumber values, but first it is necessary to educate the lumber-manufacturer to the necessity of educating the consumer. The initial work is progressing as rapidly as could be expected."

The letter then outlines the various lumber advertising campaigns which have been inaugurated in the United States, including those of the Louisiana Red Cypress Manufacturers, the Southern Arkansas Soft Pine Manufacturers and the Northern Hemlock and Hardwood Manufacturers. It also notes that the West Coast Lumber Manufacturers decided to advertise recently and that the Yellow Pine Manufacturers had been doing so for some years.

Continuing the letter says: "Lumber advertising is essential to the proper marketing of lumber. Every builder should be advised regarding wood values and wood advantages. Seemingly the public has swallowed, if it has not digested, all the misinformation regarding the worth of substitutes."

In conclusion the letter says:—"In our estimation all that is needed to make lumber advertising profitable is the proper understanding of advertising by the lumbermen, an appreciation of the fact that advertising is one phase of sales effort, not a panacea in itself, and the further admission by the lumberman that the man who pays the bills is entitled to complete information regarding the materials he uses and is a person of consequence, whose favor should be sought."

Retailers' Customers—Old and New

New customers or old ones should look alike to the retail lumber dealer. The best standard of treatment for an old customer is that which a dealer gives to a new one whom he hopes will become regular and profitable. Old customers, even though the amount of their trade may be comparatively small, are generally a greater asset to the retailer than a prospective customer for a fairly large trade. The old customer is a satisfied one and his regular trade is a permanent asset so long, as he is given satisfaction. Moreover his satisfaction is an active advertisement for the dealer. These are simple facts in connection with the management of the lumber business, but unfortunately they are not always recognized as fully as they should be. There should be no difference whatever in the treatment of customers, whether they are old or new. The standard of the retailer should be to satisfy every customer, once he has satisfied himself of the customer's ability to pay.

Seeking for new customers is often allowed to interfere with the service given to old ones, to the direct loss of the dealer. If one cannot look after both ends of the business satisfactorily, he is trying to cover too much ground or else he needs more assistance in his business. To keep old customers and make new ones at the same time, requires careful and systematic study. In looking for new customers many methods are available. The most important however, is the exercise of eternal vigilance. Advertising, sending out circular letters, and making personal canvass are the chief methods. If they are not attended to systematically, the number of new customers will not balance the number of old ones dropping off on account of competition or on account of families moving away from the district. No opportunity should be neglected of working up new trade by the method referred to. If the staff is not large enough to do justice to this work, it should be enlarged so that proper attention may be given to both branches of the business.

"Service" is a word which has taken on a very definite meaning in business of late years. It signifies those activities in connection with a business which render it capable of furnishing customers promptly with exactly the goods they require. Its duty is to keep customers who have been secured and to encourage them to make further purchases. Its work commences once the firm has got into touch with a prospective customer. If successful, it persuades the customer that he will do well to purchase, and when he has purchased it sees that the goods are delivered in such a manner and of such a quality as to make him feel pleased with the transaction.

A service department may be considered by some as unproductive of value. In a restricted sense of the word this may be true, but, as a profit producer, the importance of "service" is great. The difference between an aggressive, expanding business, and one which is practically stationary, may be measured very exactly by the difference between the efficiency of their services. If a retail lumber company is expanding at about the same rate as the community, its service is probably good, but there are many firms whose business expands even more rapidly than the community itself, impossible as this may at first appear. Such a business will be found to be following out the most advanced and effective methods of giving service. Its conception of service does not stop with furnishing simply the goods and the service which it might be expected to furnish, and supplying the district with sufficient for its ordinary growth. It involves also anticipating the requirements of the community in its own lines and in lines relating to lumber; so that a customer who is building, may be supplied with other building materials which he might have to seek in several different stores or possibly in some other town. It involves also persistent and effective preaching of the gospel of expansion; encouraging the community to grow; instilling into it, in short, the same progressiveness that characterizes the company itself.

To put the matter briefly, the retail lumber business depends upon all these departments exerting their utmost activity in getting new customers, satisfying all customers, and encouraging trade. These are the positive trade creating factors and they must be closely allied with similar standards in connection with watching credits, studying stocks, and systemizing management.

None of these factors can be neglected without affecting all the others adversely. Actual success depends upon all, and continued success depends upon their being properly balanced in proportion to the extent of the business and its possibilities of growth.

A report from Vancouver states that the Board of Works recently refused to consider tenders for lumber ranging in price from \$11 to \$14.50 per thousand feet, because the tenders were from firms which do not use white labor exclusively. A resolution was recently passed by the City Council to the effect that it should endeavor to encourage firms which do not employ Orientals.

A Vancouver lumberman has estimated that one ton of refuse goes to the burners for every thousand feet of lumber cut.

Driving Operations Helped by Rainfall

Ontario Manufacturers Report Better Conditions During Past Fortnight—Water Lower Than Usual Throughout the North

The driving conditions in northern Ontario improved considerably during the past fortnight as the result of a fair amount of rainfall. Results in connection with drives are indicated by the following reports which have recently been received.

Grant & Kennedy, New Liskeard, Ont., May 5th: This is not a good year to drive, as the water is low and the weather has been cold until now, while the snow got away little by little.

Graves, Bigwood & Company, Byng Inlet, Ont., May 7th: Our drives are all progressing favorably, and the rain we had about ten days ago filled all the creeks and streams upon which we have logs.

The Knight Brothers Company, Limited, Burks Falls, Ont., May 5th: We expect to have sufficient water to get down all our logs. Fortunately all our drives are short this year and we do not anticipate any trouble.

Chew Bros., Midland, Ont., May 5th: Our lumbering operations this season have been conducted on an island, consequently there will be no driving in connection with that. It is just a matter of getting the various lots together and making up a raft.

The Clyde Forks Lumber Company, Clyde Forks, Ont., May 6th: We expect to get all our drives down now. The main body was about ten miles from our mill and, although things did not look very favorable at first, the prospects at present are favorable.

A. Mitchell, Powassan, Ont., May 5th: I do not drive any logs myself. In regard to river driving in this district the last two or three weeks have been very good as the water has been very high, but it is going down fast now, and unless we get some heavy rains it will dry up very quickly.

Geo. Neibergall & Son, Parry Sound, Ont., May 8th: Log driving conditions here are alright. We expect our drive to come out in another week and a large drive has come out already. The water, however, is getting low, and there may be a shortage at the end of the season, unless heavy rain comes.

Keewatin Lumber Company, Limited, Keewatin, Ont., May 7th: Driving conditions here are fully as good as they were last year. All of our driving is done on lakes, and the stage of water in these lakes is about normal. We do not think we will have any difficulty in getting our logs to our mills this year.

Wilson, Campbell & Campbell, Massey, Ont., May 5th: We do not anticipate any trouble with the taking out of our drives this season. In fact, we expect to be out in a very short while with about a million and a half of hemlock, pine and spruce. The recent heavy rains in this district will assist materially in getting out of the timber.

The Trout Creek Lumber Company, Trout Creek, May 9th: We have all our drive out, but in the neighborhood we know of a drive which, we think, will be stuck, unless we have a lot of rain. As there is not much driving in our localities, we do not know much about the drives, but think there will be shortage of water unless we get wet weather.

An operator in the Bruce Peninsula, Ont., under date of May 2nd, reports a very difficult time with his drives. We were first held back, he says, by ice staying on the lake and leaving no room to run logs out. Since then, water has been low. We had no rain of any kind till April 28th, and then not enough to do any good. Two days more will complete the drive, but this is two weeks longer than it should have been. Ninety per cent. of our present stock is sold at last year's prices.

George Tennant, Bracebridge, Ont., May 6th: There is no doubt about the existence of a shortage of water in this locality this season, but have no information as to whether any of the lumbermen are going to have their drives hung up or not. As for my own I will have no trouble in getting it to the mill, as I have only a short distance and a good stream that can be driven any time through the summer.

Jacob Kaufman, Berlin, Ont., May 4th: The driving of logs at our mill is nearly completed. There apparently has been sufficient water at this point. We have 1,750,000 feet of logs this year, principally hemlock. The cost this year is nearly \$2.00 in advance of last year and the wages are about the same.

Holt Timber Company, Limited, Chicago, May 8th: Our drives on the Magnetawan River from Deer Lake to Byng Inlet are progressing very satisfactorily indeed and are up to last year in point of time.

This is largely due to the fact that we had sufficient water in storage to supply our needs, but we made extra efforts in order to obtain it, fearing the conditions which have since developed. There is practically no reserve of water in the swamps or ponds unless artificially impounded. There is still time for the rains to help out the drives but our understanding of it is that throughout the Ontario woods the water supply is very low, and that reserves are also very low, and the likelihood is that driving will be seriously interfered with.

Estate of Alfred McDonald, Peterborough, Ont., May 8th: We have two large saw log drives, one coming out of Nogies Creek and the other out of Squaw River, into Pigeon Lake below Bobcaygeon. Swamp Lake is the head of Nogies Creek and the water was five feet lower when we commenced to drive than at the same time last year. It will require a lot of rain to get out of this creek. Otter Lake is the head of Squaw River and it had a full head when starting, but no rain since to keep it up. We have quite a number of storage dams on this stream and expect to get out by employing double the usual number of men to keep the logs running clear with the one flushing of water from the supply dam.

Unless we have plenty of rain soon we would not be surprised to hear of many logs being hung up in this locality.

The Pearce Company, Limited, Marmora, Ont., May 7th: Driving conditions in this district have not been at all good. Considerable difficulty has been encountered owing to the unusually low water, which is from three to four feet lower than usual at this season of the year. We are confident, however, that one drive at least will arrive safely and we hope also to succeed in bringing the other through, although it is heavy work and will be longer coming down than has been the case in a good many years. We do not know of any other parties who will have any drives on these waters, viz., Crow River, Deer River and Beaver Creek. We understand also that firms who have considerable bodies of logs further west in the Trent River District are practically tied up, and unless we have heavy rains during the next two or three weeks it is very doubtful whether they will succeed in getting their stuff out.

Our cut of pine will be about the same as usual, but we will not have as much hemlock. As we were practically sold out of both these stocks last fall, we will require considerable of the new cut to stock up for our local trade. While the local market is fair it is not by any means as brisk as it was at this time last year.

As the costs of logging operations and driving are fully as heavy as a year ago, in spite of the favorable weather conditions, it will be very unfortunate if price cutting is resorted to, and we doubt very much if it will do much good towards increasing sales. Apparently, American competition is pretty keen. They are quoting very low figures in order to get the business. We might say further that the present season has been one of the most puzzling that the writer has experienced in many years, indications being so conflicting.

The Davison Lumber Company, of Bridgewater, N.S., estimates its cut of lumber during the winter at 40,000,000 feet.

James Robinson estimates that the cut of lumber on the Miramichi River in New Brunswick last winter amounted to about 50,000,000 feet. He says it is becoming more difficult to get men to go to the woods to cut lumber by contract, owing to the scarcity of labor and higher wages in other lines of industry.

Will Help Lumber Trade With China and Japan.

In a report to the Dominion Trade and Commerce Department Mr. Gordon Johnson, the new Canadian Trade Commissioner to China and Japan expresses the view that the opening of the Panama Canal will be of great advantage in developing the Canadian lumber, pulp and paper trade with the Far East. "While Eastern Canada," he states, "is handicapped by its great distance by water from the Orient, the opening of the Panama Canal will put Montreal at least in as favorable a position in regard to distance as European countries, so that not only British Columbia, but Ontario, Quebec and the East should be in a position to take a share in it."

The forests of Argentina are said to contain enormous reserves of quebracho, a tree of large size producing a very hard wood containing from 16 to 26 per cent. of tannin. In 1911, Argentina exported 68,431 tons of tannin extract, besides 35,793 railway ties made from this wood and 438,216 tons of the timber.

The Reader's Viewpoint on Trade Topics

Ontario Hemlock Manufacturers' Ideas Regarding Wisconsin and Michigan Stocks—A Few Questions About the Panama Matter

The importation of Wisconsin and Michigan hemlock into Ontario has been increasing of late, and the Canada Lumberman recently received a letter from a large consumer of this lumber, which brought up the question of how it can be imported into this province and compete successfully with the hemlock produced by Ontario manufacturers. The consumer in question uses a large amount of hemlock, and in his letter said that he could buy the Wisconsin hemlock much cheaper and that it was a better class of lumber. He had taken as much as 5,000 feet absolutely clear out of one carload of 1 x 10-in. hemlock, and he concluded by saying that it was "only a matter of a short time before the Ontario hemlock manufacturers would have to get in line and put up a proper grade."

The hemlock manufacturers of Ontario recently drew up regular grading rules and formed themselves into an informal sort of an association. While they are not organized in any way, they hold regular meetings and exchange information as to the output of stocks, and the general state of trade. At all their recent meetings it has been the opinion of those present that their grading rules have been the means of improving trade conditions greatly, and that during the last six months or more, prices of hemlock have been so low in comparison with the cost of production that, if they were to go any lower the manufacturers would have to operate at a loss or go out of business. These views and those expressed by the consumer of hemlock referred to above are so clearly opposed to one another that the Canada Lumberman, feeling that something in the form of an expression of views from the hemlock men would help to clear the air, sent a copy of the remarks of the consumer to a number of hemlock manufacturers in Ontario. In reply we have received the following letters:—

Has No Trouble Selling Canadian Hemlock Grades

Editor Canada Lumberman:

Owen Sound, May 4th.

We thank you for having called our attention to remarks of an "Important Ontario Consumer of Hemlock."

Our experience is that Michigan and Wisconsin hemlock is invariably sold graded as what they call "merchantable" and includes up to thirty per cent. of number two quality.

We had one of the largest manufacturers in Michigan here the other day and he was asking \$18.00 per m. for their hemlock of this grade, in cargo lots, running from 2 x 4-in. to 2 x 12-in. and the buyer would have to take this stock as it runs, mixed widths and lengths.

We are selling No. 1 quality, assorted widths and lengths, giving the buyer the number of pieces of each size wanted, at \$20.00 per m. f.o.b. car here and on this basis, we have no trouble in selling all we can manufacture.

The expense of logging and manufacturing has increased so much that we could not successfully continue if we had to sell at a lower price.

There are a few wholesalers and scalpers in Ontario who are continually using arguments of this kind in order to force the manufacturers to lower their prices. These wholesalers and scalpers do not increase the consumption of lumber and in our opinion the trade could get along very nicely without them.—John Harrison & Sons Company, Limited.

Thinks "Ontario Consumer" Should be a Wholesaler

Editor Canada Lumberman:

Huntsville, Ont., May 5th.

We are inclined to think that the Ontario consumer who has had such wonderful luck purchasing Wisconsin hemlock should go into the wholesale business, or better still come north and show some of the northern mill men how to manufacture hemlock and sell it with a profit, at \$3.00 to \$5.00 per m. less than last year's wholesale prices. We are inclined to think this consumer was in very badly last year, or he has fallen into a particularly soft spot for 1914. We tried to pick all the clear 1 x 8-in. and wider out of a million and a half feet of hemlock cut in 1909 and only put up about 6 m. feet. This 6 m. feet was not absolutely clear. We gave up in disgust trying to get clear hemlock.

We might also say that during the present day we have been called up by responsible Toronto lumbermen who bought 1 x 6-in. and 1 x 8-in., also 2 x 4-in. and wider 10 to 16 ft. hemlock, at a price equal to the best price we received during 1913. This stock was fresh from the saw and the dealer who bought it has as good credit as any firm in the city.

We do not wish to appear in a discussion of the present prices of hemlock but are satisfied that before the snow falls in 1914-15 it will

be difficult to obtain sufficient hemlock to meet the needs of Ontario builders.—Northern Manufacturer.

The Panama Question—What is the Answer?

Editor Canada Lumberman:

Toronto, May 5th.

Your editorial on "B. C. Fir and the Panama Canal" raises many questions that will be settled only by time and actual experience.

It seems to be assumed off hand that, because someone has predicted that lumber will be carried by water from the Pacific Coast to Atlantic ports for 20c per 100 lbs., therefore there will be a tremendous decline in values in the east; that the eastern markets will be flooded with cargoes of Pacific Coast lumber and that receiving and trans-shipping yards in Eastern Canada will handle the business which is now done direct by rail from the British Columbia mills.

It is easier to ask questions than to answer them in the absence of definite information or experimental knowledge. But there are a few questions that may be raised at the present time.

Is it likely that Pacific Coast manufacturers will give to the eastern dealers the full benefit of any reduction in freight rates that may follow the opening of the Panama Canal?

Why should it be assumed that Pacific Coast lumber on a freight rate of 20c to an Atlantic seaport will be a ruinous competition with yellow pine on a relatively lower rate by rail from the south to northern points?

Is it likely that the great transcontinental roads in Canada and the United States will hold up a freight rate of 67c per 100 lbs. and let the Panama Canal route take away all the Pacific Coast business?

Are railway freight managers built that way?

Freight rates are based on many factors, such as competition, time, occupied in transit, return cargoes, etc.

Tramp steamers will probably be the first to experiment on rates. What return freight can a steamer obtain from the Atlantic back to the Pacific Coast? One-way traffic is not a paying proposition.

Experience alone will demonstrate what rates will be profitable for the carriers, and until the Panama Canal route has been tried out, we are only making guesses.

What share of the expected increase in trade will the British Columbia manufacturers obtain? Oregon, Washington and California sawmillers have equal advantages in this market.

Is it a feasible business proposition to assume that a receiving and trans-shipping yard in Eastern Canada could be made to pay in competition with the carload trade direct from the British Columbia mills to the retailer in Ontario?

These are a few of the questions that time and experience only can settle.—John Donogh.

Will Cross the Bridge When They Come to it

Editor Canada Lumberman:

Toronto, April 30th.

The effect of the Panama Canal upon the lumber trade is something which we have been thinking about for quite a long while, and upon which we have had correspondence with some big firms in the south. Their answers at that time were, "that they would cross the bridge when they came to it."

It is a big question and in the course of time prices as between southern pine and B. C. fir will level themselves up like so much water.

We have been given to understand that the price of the British Columbia timbers for Toronto harbor was about \$30.00 per M., which would make the contract \$720,000. If you are taking the price which has likely been paid for the timber at the coast your figures (\$250,000) would not be much out of the way.

We find the freight on shingles is costing us from \$1.02 to \$1.05 per M., occasionally slightly more.

One of the things which must not be lost sight of is that a great deal of the business as between eastern points and B. C. is for hurry-up orders, 1, 2, 3, 4, or 5 cars perhaps, and such orders could not very well be filled via the Panama Canal. It is true that there are firms who propose having facilities on the eastern coast for filling such bills from stock but they could carry twenty million feet, and be asked every day for what they have not got, and such stocks could not be carried except at very considerable cost.

Hamilton & Willis, incorporated as the Vancouver Cedar Lumber Company, have taken over the saw mill and plant of the South Vancouver Lumber Company, at Eburne, B.C., which was owned and operated by W. R. Dick. Mr. Hamilton was manager of the Canadian Cedar Lumber Company, Vancouver, while Mr. Willis was sales manager of the Hastings Shingle Company, Vancouver.

Has Canadian Pine Met Its Equal ?

Siberian Yellow Pine Manufacturers Securing Recognition in United Kingdom
—Will Probably Invade China and Australia Also

Several articles have been published in the Canada Lumberman during the past year, dealing with the trade in Siberian yellow pine, with the United Kingdom. These articles drew attention particularly to the fact that this Siberian product is generally acknowledged to be the equal of Canadian white pine, and that it is being accepted in the United Kingdom as a perfectly satisfactory substitute. An important illustrated article dealing with this timber appears in the annual special issue of "Timber" of London, England, which was published on March 31st. The references in the article to "Quebec yellow pine," refer, of course, to the well-known Canadian white pine, which is generally known in the United Kingdom as "yellow pine." The "standard" referred to is the St. Petersburg standard hundred of 1980 superficial feet.

To trace the history of this comparatively new wood, the article says, will possibly be of interest to a large number of our readers, especially those who have for many years handled Quebec yellow pine, and who, by reason of the consistent appreciation in value of that most excellent wood, have found, as time has gone on, that not only the demand, but also the margin of profit, has gradually dwindled, until it has become a question whether it is worth while putting the Canadian wood into stock. In fact, large holders of pine have in recent years been compelled to consider the advisability of turning their attention to other branches of the timber trade, because of the more and more restricted demand for an article which had been with them the corner stone of their operations. It is possible that, with the advent of the substitute which is the subject of this article, the decline in the use of pines, which has made itself so unpleasantly felt, will be arrested, and, by reason of its efficiency as a substitute for the Canadian article, and the considerable advantage offered in price, a revival and broadening of the consumption may be inaugurated. Granting that Canadian and Siberian pine are of equal merit, there is one very substantial reason for merchants regarding the latter sympathetically, and that is, the larger margin of profit which it bears.

Prices of Siberian Pine

We have seen a price list of one of the great importing firms of this city, according to which an abundant inducement is offered to merchants and consumers. We see that 1 in. to 2 in. thick, x 7 in. and up wide, averaging 13/14 in., can be purchased at £29 per St. Petersburg standard hundred, as and where lying in the docks. Other prices are as follows:—

2½ x 7 in. and up, av. 13/14 in.	£30
3 in. and 4 x 7 in. to 10 in.	£31
3 in. and 4 x 11 in.	£35
3 in. and 4 x 12 in. and up	£36

While, for a selected specification of siding, as, for example, 2 x 12 in. and up, £33 10s. is asked. Such prices make Quebec stocks look very dear, and, at the same time, show that other pines, such as the Californian variety, cannot hope to attract much attention.

It is an undeniable fact that each succeeding shipment has shown in some feature or other distinct improvement on the previous one. The grading and manufacture has consistently improved all the time, but what is much more important, the recent shipment imported in Liverpool and London, ex the "Andree Rickmers," for example, shows that closer attention has been paid to the regularity of character. What, after all, does it really matter, from any practical man's point of view, if a small percentage of pieces in a parcel is not quite uniformly sawn or contains minor defects. These are trivial difficulties which are easily adjusted, or even overlooked, by merchants, if the nature throughout compares favorably with the sister wood.

After a brief reference to the botanical identity of Siberian yellow pine, the article continues:—It would be claiming too much were Quebec shippers to assert that even the best of their productions were free from a substantial percentage of pieces which might be termed hard-grained, and this being a fact generally admitted leads one to the belief that Vladivostock shippers will not set themselves such a stupendous task to equal Canadian shipments as it appears to be on the face of it.

An outline of the development of the import of Siberian yellow pine into the United Kingdom is then given, after which the article says:—Generous opinions are expressed by the leading pine men of the United Kingdom, but it should not be overlooked that mixed shipments such as have been sent over in whole steamer loads gives the chance for adverse criticism. It is only fair to say that the atti-

tude of Quebec shippers vis-a-vis Siberian yellow pine is by no means unfriendly. On the contrary, a number of them have frankly admitted that the bulk of all shipments of planks, etc., so far made to this country, was identical in all respects of merit to their own lumber. It seems therefore, only a question of eliminating an unsatisfactory percentage from the shipments to put the Eastern wood on the same level of excellence as the Western. A great deal of study and care has been given to this point.

The Low Grade Problem Troublesome

The market in the United Kingdom calls for the higher grades of Siberian yellow pine and the difficulty has already arisen of disposing of the balance of the product. The heavy logs now being taken out of the woods running from 20-in. to 40-in. are calculated to give 25 per cent. of 1st quality export planks, etc., and herein lies the chief reason why the export is hardly ever likely to reach big figures. Vladivostock is 12,000 miles from the United Kingdom, the freight £6 to £8 per standard, and chartering difficult. It therefore does not pay to ship anything but first quality, with, perhaps, some seconds, in favorite sizes like 3 x 11 in., and broads. To produce 1,000 standards of first and seconds, the millman must cut, roughly, 4,000 standards, and in the disposing of the 3,000 standards of what is termed out there "Brack," he is up against a very troublesome proposition. Up till now the Russian Government has called for enormous quantities of this lower-grade sawn material for building barracks, etc., and there have been other outlets, which are now non-existent. True, the Chinese Eastern Railway is a big buyer, but one mill can easily supply their yearly requirements. What, therefore, is the millman to do with his 3,000 standards of lower-grade stock, if he is ambitious enough to wish to cultivate export connections for a quantity like one thousand standards? Perhaps the solution lies in the great Chinese market through Shanghai, which absorbs about 150,000,000 feet of merchantable Oregon pine per annum.

The export of wood from Vladivostock made enormous strides in the years 1910-1912, as can be seen from the following table:—

1910.	1911.	1912.
cubic feet.	cubic feet.	cubic feet.
399,700	949,550	1,219,570

Of the 1,219,570 cubic feet exported in 1912, 317,892 cubic feet consisted of yellow pine logs, and 461,032 cubic feet of yellow pine sawn lumber. Owing, however, to the fact that the sale of the production of the lower grades now presents greater difficulties, it is highly probable that 1913 will show a slight recession, and, as far as 1914 is concerned, everything goes to show that the quantity of sawn goods now being prepared at the strictly limited number of sawmills which have remained in the export business will be so small in quantity as to render it unwise to prophesy.

Looking for Wider Markets

There is little doubt, it is stated, that the Siberian and Manchurian timbermen have their eyes on the two immense markets almost at their door, namely, Australia and China. Pacific Coast lumbermen have had these two huge markets pretty much to themselves, but in the face of what follows, it cannot be doubted that before long our American friends will be compelled to contest every Pacific market with the Russians, and it is by no means without the bounds of possibility that the war will be carried into their own Continent. We see no reason why Siberian shippers should not enter the great Argentine market, which takes large quantities of "Select and Better" pine, and even the Eastern States themselves may not be immune.

The article then discusses in detail the shipping facilities at the various harbours in the far east and concludes in part as follows:—The outcome of all this will not be to flood our markets with first quality pine deals and sidings, but Pacific Coast lumbermen who have been in the Chinese and other Pacific markets for years and years are certainly going to feel a bad draught, and it has been suggested that, instead of fighting the competition, the Americans should apply their experience and co-operate with the Russians. It might be argued by readers when they learn of the preparations being made to facilitate shipments at Vladivostock and Nicolaevsk, that the natural result must be to occasion over-supplies of high grade pine. Well, it probably will result in a much larger production of U. K. material, but by the time that the timber industry in the Far East has attained to that condition of development which this article forecasts, the supply of first class pine from Canada may be very much diminished, and so the balance will be maintained.

B. C. Trade Opportunities Neglected

United States Firms Steadily Increasing their Domination in Foreign Markets—Situation Reviewed by Henry Pearse

At a recent meeting of the Victoria, B.C., Board of Trade, an important address was delivered by Mr. Henry Pearse on the export lumber trade in British Columbia.

"British Columbia today is not getting a tithe of the existing Pacific export timber trade. It cannot be a matter of price for the reason that practically the same conditions of production obtain all along the Pacific Coast. It must be because we are not commercially equipped to handle the business that is offering." Mr. Pearse's remarks were opened by this statement, which formed the basis of what he had to say on the subject. He referred to the fact that the United States, through its Department of Forestry, assisted by their commercial departments, were demonstrating to the timber consuming countries how valuable was the Pacific Coast timber. Brochures were published declaring that "Douglas fir may be considered as one of the most important of American woods." He added, however, that the average importer would imagine that the northern Pacific Coast "began and ended with the United States." Something ought to be done, he claimed, to bring British Columbia more prominently before the importing countries. Without action British Columbia would not for many years get anything near its fair proportion of the export business.

"It is not sufficient," Mr. Pearse continued, "for the milling industry here to sit down and say that, with the opening of the Panama Canal, everything will come right. It is not sufficient for the government, Dominion or Provincial, to say that the country possesses the supply and therefore, when the demand comes we shall get the business. With the exception of the United Kingdom and the eastern United States markets, the Panama Canal will have little geographical effect on the export trade. There is a slight advantage in exporting to South Africa, but the larger markets such as the Argentine, the Orient, and Australia are not affected by the canal route. From an experience gained during the last twenty years, of the export produce trade, I say most emphatically that unless some provision is made immediately, whereby the world's importers are educated to the fact that British Columbia possesses a large quantity of timber, and is able to export that timber, the United States will dominate the whole of the trade on the Pacific Coast and put back the industry in his province a decade."

Significant Figures of Foreign Trade

Going into his subject in detail Mr. Pearse observed that he thought it could be proved by statistics that there was a reason for British Columbia's failure to get a fair share of the business. "Twenty years ago," he said, British Columbia was shipping 34,000,000 feet out of a total of 111,000,000 feet shipped from the Pacific Coast to Australia, South America, China, Japan, Mexico, Central America, United Kingdom, Europe, Africa and other foreign parts. In 1913 the province shipped to the same countries 47,000,000 out of a total 600,000,000. Twenty years ago British Columbia enjoyed more than thirty per cent. of the Pacific export trade. It now is content with less than eight per cent.

"Taking Australia alone—in 1912 British Columbia shipped 25,000,000 feet out of a total of 199,000,000. In 1913 British Columbia shipped to Australia 10,000,000 feet out of a total of 238,000,000 feet. The British Columbia shipment to Australia in one year decreased 15,000,000, i.e., sixty per cent. and the American shipment increased 39,000,000 feet, i.e., twelve per cent.

"The chief consumers of Pacific Coast timber are Australia, West Coast of South America, and China, who take 460,000,000 out of a total 600,000,000 exported. The next largest consumer is the United Kingdom, which, in 1913, took 45,000,000 feet."

Mr. Pearse went on to quote from an article by Major H. G. Joly de Lotbiniere, published by the Quarterly Review in September, 1913. This gives some interesting figures with respect to the lumber export trade and there was one paragraph of significance, it follows: "With the opening of the Panama Canal, we (England) shall no doubt for some time to come, receive large quantities of Douglas fir, a species which has been introduced into this country (England) as a forest tree and promises exceedingly well; but British Columbia timber will be in great demand in China, Australia, United States and South America, and we cannot count upon receiving a permanent supply from this source."

At this point Mr. Pearse quoted some interesting figures: "Eighteen years ago the shipments from the Pacific Coast to China and Japan were: 'Washington and Oregon—22,499,767 feet, B.M.; British Columbia—15,550,324 feet B.M.; total, 38,050,091 feet B.M.

"In 1913 Washington and Oregon—122,442,362 feet B.M.; British Columbia 5,176,157 feet B.M.; total, 127,618,519 feet B.M.

"The shipments alone to China were: Washington and Oregon—106,429,576 feet B.M.; British Columbia—452,412 feet B.M.; total 106,881,988 feet B.M.

"The figures," he added, "relating to Chinese shipments are so extraordinary that the only explanation is that the Puget Sound shippers have sent their boats up to British Columbia ports, get cargoes and shipped Canadian lumber as American. If this is the case it only makes the state of our export lumber industry more serious."

The Explanation

Commenting on the reason for this decline in the export trade Mr. Pearse said that it could not be that the local demand exceeds the supply, because the unfortunate fact was that many of the mills have had to close down. He declared that it was not that the competition was so strong that the mills were selling at a loss on the other side. "Competition never sells at a loss for long," he observed, and this gradual decline in the export trade has been going on for the last twenty years.

After characterizing the British Columbia mill owner as a practical man, knowing his logging and milling trade, but not the shipping trade and import markets of the world, Mr. Pearse declared that it was absolutely necessary, in the interests of the industry, that an Inspection Bureau be established in British Columbia. It ought to be, he maintained, under the control of the Forest Branch of the Department of Lands and one of its functions would be to certify officially the grade, and tally all the shipments from our ports. There was no reason why this should be any expense to the government. In the profit and loss statement of the American Inspection Bureau for the year 1913, the gross income was \$44,118.54 and the gross operating expenses \$39,545.66. It was a well-known fact to anyone in the produce trade that all foreign countries would rather handle produce under an English certificate and through an English broker. This was incontrovertible and was easily proven by the fact that England herself was practically a clearing house for the world's produce.

British Columbia would be an important factor in the timber markets of the world. The demand was enormous. The English Board of Trade returns for 1911 showed that the United Kingdom imported over \$140,000,000 worth of coniferous timber in that year. Their supplies were drawn chiefly from Russia, Sweden, and the United States. He then went into minute particulars of the growing markets of Russia, where the population was increasing at the rate of 2,250,000 a year and where half the annual growth of the country's forests was being cut; of Sweden, where the export of structural timber had remained stationary for the last twelve years; of the United States, where the original forests had been reduced in area from 850,000,000 to 550,000,000 acres, and of other nations.

This Province, Mr. Pearse asserted, had in the Douglas fir, a product that, for beauty of appearance, strength, and ease of working was unsurpassed by any timber that could be largely exported. The United States realized this superiority when it devoted several years of a technical investigation of the properties of this wood and established standard functions for use in designing structures in which Douglas fir was used.

"In December last," continued Mr. Pearse, "I wrote to the Chamber of Commerce, Melbourne, asking to be put in touch with one or two of the large timber brokers and importers. The response was most extraordinary. Every firm that wrote to me expressed surprise that British Columbia did not do more direct trade with Australia and that more information was not available as to the merits of our fir as a structural timber. I am now in communication with China, South Sea Islands, United Kingdom, South Africa, India and South America and am quite satisfied that the same opinion will obtain in the minds of the importers of the different countries enumerated.

"Take the Argentine trade alone—the Mexican Gulf last year shipped nearly 400,000,000 feet of yellow pine, most of which went to the River Plate ports. A study of the map will show that the distance direct from New Orleans to the River Plate is not much less than B. C. to River Plate through the Magellan Straits."

Mr. Pearse declared that the industry had suffered generally by many over-capitalized companies. The solution lay in the employment by the Canadian Government of a man conversant with the shipping and export trade and having knowledge of the local conditions obtaining in the lumber industry of British Columbia. He should be invested with as much dignity as was possible to make him an accredited representative of the Canadian lumber industry and he should visit the markets of the world and interview the several importers and shipping companies. Notwithstanding the labor

conditions here, there were markets today in this world ready to take the Douglas fir at a price that would pay handsome profits.

Mr. Pearse concluded: "We have a sufficient supply of matured timber on our land to build up industries that would pay tens of mil-

lions of dollars in wages annually. I have proved that there is an enormous and largely increasing demand. Shall we be content to wait for years and years, until, by the insistence of demand over supply business will drift to us? Or shall we reach out and take it now?"

Merchandising of Lumber

From the Standpoint of the
Wholesaler and the Retailer
By Julius Seidel*

I very much fear that that policy of merchandising which is current with the most progressive ideas in other lines of manufacture has not received that attention on the part of lumber manufacturers which it deserves. But that censure is also merited by all the branches of the lumber business—mill interests, wholesaler, and retailer.

We have been lacking in the art of so merchandising as to continue being an attracting force to those who were our best customers, and are failing as well to sufficiently interest those to whom future developments may make us one. We are dealing in lumber, the article that helped civilization to populate the new world, lumber that was as available as it was useful, lumber that was as workable and bent itself to the effort of an ordinary workman as well as it did to the effort of a skilled mechanic, lumber, an article which in its varieties was boundless and adaptable to all kinds of uses in the localities where it grew.

Consequently lumber merchandised itself—it did not need much advertising—it almost sold itself. The methods of merchandising to-day are, therefore, based more upon what was, than what should be—and the advertising of lumber, while of utmost importance, is secondary to the fundamentals of merchandising.

Lumber Merchandising—the Wholesaler's Standpoint

In discussing the merchandising of lumber, I do so from the standpoint of a wholesaler with a yard to back me up, and also from the standpoint of a retailer distributing in a large city. Let us, therefore, first consider the changes in location of forest supply; then the change in local demand; the character of a city's lumber demand and its changes, as compared with that of town or village. We can then see where the substitutes propagate and why they succeed. We must be awake to the transformation from a developing community to one of permanence, as it takes place all over the country, and under this head would come building construction, railroad work, street work, bridges, etc.

When we weigh all of these factors in our minds, we cannot help but reflect upon what is necessary to keep "our business" a business. Let us consider the former manufacturer of a time when smaller mills which were sawing wood were one of the mainstays of a community.

Did you ever stop to consider the local pride that attaches itself to boosting the product of a "home" manufacturing plant—would not the employees as well as the dependents act as boosters? Do you also appreciate the influence in his community of the proprietor and his woodworking force, now manufacturing the wood competitors, a force that the sawmill wielded? Do you not believe his employees are tooting their horns about their products? Would you expect an employee of a wall board factory to use a wood ceiling, or an asphalt shingle maker to buy wooden shingles? Think about this and then let me get back to the old mill town. Most of those old mills have vanished and we find our source of supply at far-off points, with distances varying from 250 to 2,500 miles.

The Change of Mill to New Fields

A great many of the mill men have migrated from these forest countries to new fields, and this marks the beginning of a change in the merchandising of lumber. The yard was liquidated, or perhaps sold out to some successor.

Here it is where the manufacturer separated from retail merchandising. The manufacturer has, however, tried to continue in his paternal power of merchandising his lumber. He seems to forget, in a measure, that his personality has passed away from his old community—that he surrendered his right of "eminent domain" to another, and he must recognize this condition of affairs. We say, therefore, "All hail to the old man"—he's as fine a fellow as walks the earth—but he's been bossing so long that he kind of overlooked the kid who has grown gray-haired and ought to have a look in once in a while, and a say so, too.

Now, why should the wholesale yard man be tolerated? Can the mill man successfully sell direct with lumber receding from the main centers of demand? There are other trades establishing branches of their own, or agencies, so as to be before, and nearer to, the people and to offer to furnish them supplies quickly. Here are the lumber-

using communities demanding an assortment of all the new kinds of lumber coming into prominence. Who will put his money into them? Can you, Mr. Manufacturer, overlook your boy, the wholesaler, and your boy, the retailer, when you outline a national campaign?

What is the wholesale yard doing for you right now? Nothing less than bringing the forest back to the doorstep of the consumer. The wholesaler has returned to what was your home town in the forest area. The wholesale yard is trying to build up lumber and continue lumber for a real market, where you can get what you want in or out of season at a marketable price. It is selling to the smaller yards of the country, who cannot buy straight carloads of the new kinds of wood, since their communities would not consume them within a period commensurate with the investment.

Overstocks in Small Yard

You cannot expect a retail lumber yard to keep a \$20,000 stock in a community that uses only \$20,000 a year all told, and still keep all the types to be considered as "progressive." The source of supply being so far away makes it hard enough for the retail yard to anticipate the demand, not to speak of the difficulty it has of taking its place in line and waiting for cars besides.

The wholesale yard, therefore, in my opinion, must take a large part in the introduction of new woods as relay stations or storage yards. So the wholesale yard, at any rate, saves the retailer from the instability of the market, or on slow-moving items.

Quite a difference in this method from that of "The Weather Bird" merchandising of the mill man under the "subject to prior sale" slogan. The sales manager gets to the office, opens your mail, sees orders in sight for eight cars 2 x 4-16 ft.; you consult the barometer and find seven more cars with the other boys about town—result, clear sky for 2 x 4-16 ft. So take in sail, turn back half the orders and raise the quicksilver two points. How about No. 2 boards? Heavy gale, looks cloudy—drop your quicksilver, and so on until you scrape the bottom of the harbor.

Should Lumber Be a Stable-Priced Building Article?

Now, should merchandising in lumber be a speculative game, a wheat pit drama, or should it be a stable business? If we believe in lumber as a stable commodity, can these conditions be remedied? And is our "latter day way" of mill marketing correct and conducive to the making of friends among the family, or of discord and distrust? How can the public have confidence in a double-edged proposition? In the fall, when other lines want business, look for it, prepare for it, we have to stand for the boost; tell the buyer about the waning forest supply, and next spring tell him that the forest has expanded and prices are going down. The wholesale yard is stable—it quotes a positive price, which must by the very nature of things, be on the market; it acts as a promoter of the use of lumber, because it keeps the full line and has the pleasure of roosting on a volcano of changing market conditions.

The wholesale yard keeps a complete line of all the commercial woods and must of necessity have a large capital invested in the newer kinds of wood seeking a market. Once it has them in pile, they claim much of the yard's attention, since a market must be found and developed, or money lost on the investment. Now, I do not relate these stories from humorous motives. There is, though, humor in them—but grim reality will lead you to believe that there is too much poker playing among the members of your own family.

This brings up right up to the stern reality of the question why substitutes are gaining ground with the distributing, or retail yard. Mr. Substitute has a policy in his merchandising, a fixed policy. His price is established and is not subjected to the daily price barometer, the "Weather Bird" price.

Relation of Mill Wholesaler and Retailer

Now, take the wall-board people. They have their agencies who buy carloads, who take care of the jobbers at a fixed percentage of profit, thus giving the retailer a positive price to work on. Now if they work the small buyer earnestly, the latter, the retail yard, can become a car buyer, that meaning a hope of reward for his trouble in the shape of the jobbers' extra profit. Worth working for, is it not?

*Address delivered before National Manufacturers' Association at Chicago.

Compare this kind of merchandising with ours. How did your books look to you in December—just like the weather, cold and dreary? But, why worry? We are the most Christian people on earth, and oh! so hopeful that the future may be bright.

Naturally a dealer does not like to sacrifice real money on a staple commodity like lumber and, mind you, through no fault of his. He is trying to do his duty by the community by keeping a full line, and a change of six dollars a thousand on common lumber between high and low point inside of a year is not justified. It is not a fair difference to a mill man, wholesaler, dealer, or buyer. As a matter of course, a dealer is in business to make his living by it, and while he wants to defend lumber against substitutes, he must defend his investment against loss, and the substitute has it on us when it comes to that.

Changes in Building Codes

It is the dealer's duty to watch the building codes in his community and have lumber receive its due consideration. Let us be justly fair, and not fairly just, in speaking of cement, brick, tile, slate and iron. The types of heavy, enduring structures that tower to the sky and which issue bonds, often for ninety-nine years, must guarantee indestructibility. 'Twas ever so long before the Christian era that in the enduring monument stone was used.

But we have field enough in business structures where lumber offers safety, chance for remodeling and expansion, in connection with low cost. We are not all building monuments for the future.

The dealer must be more interested in the styles of lumber. He should push the bungalow idea of building. Push the double floor idea for insulation and deadening of sound. Encourage the architect to specify beamed ceiling in the dining and living rooms, to show the beautiful effects that can be secured out of wood products, and thus keep up with the style.

As an illustration of what a dealer can do, I will mention that for five years we have been pushing oak flooring. Some circular matter about sanitary linoleum and oil cloth reached me at my home and set me thinking.

Oak flooring, the most beautiful and sanitary of woods, it struck me, did not even have a look-in on the business, or a friend to talk for it. So we put out 10,000 circulars, with a color-tone of oak flooring in its natural color. We sent these to carpenters, business men and tradesmen of every kind, telling of the sanitary qualities of oak flooring; said that we would make them a lump price on laying a floor complete, waxed and varnished. We, of course, told our customer, the floor layer, all about our move—working with him—as all we wanted was the floor out of it.

Then we put in a separate circular for lumber, telling these same consumers that we would deliver to them any quantity of lumber, cross-cut, ripped, dressed up, neatly bundled and tied with a blue ribbon ready for use. These circulars attracted attention to lumber. We did not get all the business that was created by it, but we got some of it, and the other boys got some. Now, the sawmill doth not like to make specials—it wants to standardize the sizes—wants to make a ready-made clothing affair out of all its lumber, but there are many people who want odd things that everybody does not have, just as you want your suit tailor-made of original design and imported woolen. Everybody does not want beaded ceiling like grandpa used. It's time we got up some new patterns.

Sell What Your Customer Wants

The dealer should be prepared to cater to these whims and "get out lumber to order" with just as much pleasure as the staples.

Lumber in the future will have to be furnished in a most complete utility state from year to year. The shop work of the carpenter is a past issue, because machinery can do it better and cheaper. Sash and door houses furnish sash primed and glazed. Yes, they furnish doors and jambs filled, varnished and fitted, ready to set in the wall, and casing cut to length and coated. Why should we not learn from them a valuable lesson?

We have been following the path of least resistance in the retail line. We want to deliver lumber in the crude, realizing while we do it that hand-work at the building site may make the articles, when in place, higher than eye-beams, expanded metal, and other things that are after us competing for the same order. The advertising of finished house patterns is only a forerunner of what we will come to, or rather should have proposed for certain houses long ago. We should not censure the concerns who advertise finished cut-to-order patterns, but should be on this job and learn, learn and learn, and think, think. The retail yard will, in certain localities, have to put in machinery to handle this business. Last year we handled a shelving order of \$4,000 cut to size. Who knows but if we had not had the facilities to do this work that the wire rack or ornamental iron form would have gotten the business? And others can do as well.

Lumber Treating

If treatment of lumber is to be promoted, we must not overlook

this, namely; that the lumber retailer or his nearby wholesaler will have to take care of the local man wanting small quantities who cannot offer a treating plant a drum full at one time, yet needs to have your attention and consideration, because he is a true friend of the lumber product.

Gentlemen, there is light ahead. There have been types of trees put into lumber sizes for which, by their worth and character, they were not intended. But the Panama Canal will help our business to keep only the higher types of trees into their enduring places so that the third-grade and inferior kinds from cut-over land will take their places and step down to the uses for which they are properly adapted.

This subject might be likened to the broad ocean, whose waves touch many shores, and for the short time at my disposal I have endeavored only to cover the most important as they arise, like the sun of the day, above the water line. The modern way is to diagnose a case before you operate, and we must touch upon the symptoms first to arrive at a conclusion—so I would call this a diagnosis with some suggestions of a remedy.

There is need of more family reunion—the mill man has been busy—the wholesaler has been busy, and the retailer has been busy, each interest intent upon solving this great and stupendous undertaking of the merchandising of lumber, and solving it right. May the brotherhood of the forest stimulate closer and more endearing relations for the future between us all.

Michigan Hardwood Manufacturers Optimistic

Market conditions in Michigan were reported upon at the spring meeting of the Michigan Hardwood Manufacturers' Association on May 5. The market committee stated that sixteen lake shippers report 15,164,000 feet of maple lumber available for flooring purposes on hand as against 15,367,000 feet on hand one year ago. The same sixteen members reported sales last year of 29,206,000 feet as against 26,890,000 feet for sale this year. The committee report also stated that three large shippers, not members of the association, who cut 7,000,000 feet of flooring stock last year are now out of business. This with the 2,316,000 feet less to be sold will reduce lake shipments of the stock by 9,316,000 feet. It was also shown in the report that maple lumber available for flooring in the hands of rail shippers, is practically all sold at last year's figures or better and the flooring business is in good condition and the manufacturer fully able to pay the prices prevailing last year. The report predicts that prices will remain firm. Owing to the restricted privileges governing transit shipments the committee has discovered that many jobbers have discontinued business so far as maintaining yard stocks is concerned, and it is a known fact that there are few stocks in the hands of the middleman from which consumers can draw their supply of rough lumber. At the same time wood-working factories are mostly running and depleting their reserves, and consequently in the near future this will make it necessary for them to seek the producer to secure their requirements.

The estimated cut for 1914 secured January 1 was 458,000,000 feet. On account of the open winter estimates were again taken April 1 and found to be 450,000,000 feet.

It is the opinion of the committee that the lumber business has suffered less than any other of the great industries of the country, and the Northern hardwoods less than any other branch of the lumber business.

Canadian Western Report on Year's Business

The report of the Canadian Western Lumber Company, Limited, Fraser Mills, B.C., for the year ending December 31st, 1913, contains the following reference to business conditions:—"Early in the year acute stringency made itself felt in the building trade throughout Western Canada, resulting in a large decrease in building operations, and also obliging retail lumber dealers to make large reductions in stocks on hand. All this resulted in a sudden and very heavy falling off in the demand for lumber. As a consequence, the company did not put into operation the two new sawmills, which were completed early in the year. As the depression continued it was decided in August to discontinue night operations. These have not been resumed.

"The lumber manufactured for the year was 130,155,641 feet, a falling off, compared with the previous year, of 34,905,761 feet. Lumber sold aggregated 120,982,383 feet, a decrease of 3,303,050 feet compared with the previous year. Owing to the depression the logging camps operated only ten months during the year, but during that time produced 124,542,420 feet compared with 107,504,670 feet in 1912, an increase of 17,037,850 feet.

"In common with other companies, and as a result of increased wages and increased cost of supplies, which became effective at the first of the year, manufacturing costs show an increase over 1912. Owing to extensive reductions in wages during the last month of the year, which are still effective, the directors hope that the costs for 1914 will get back to the basis of 1912.

Judgment Given in Ottawa Freight Rates Case

The Dominion Board of Railway Commissioners gave their decision on May 12th in connection with the application of the Canadian Lumbermen's Association and the Montreal Board of Trade to prevent the railway companies from charging a domestic rate on lumber from Ottawa to Montreal of 6 cents per hundred lbs., and also a 6c export rate. By a former judgment of the Board the railway companies were permitted to charge 7c a hundred lbs. as a domestic rate and were ordered to charge a lower rate for export shipments. They made a practice, however, of charging 5c per hundred lbs. from Ottawa to Montreal during the summer months so as to meet water competition. This year the railways decided to charge 6c during the summer, as water competition is not so keen as formerly. This 6c rate applied to both domestic and export shipments.

The Board now finds that the railways are entitled to charge 6c for domestic rates if they wish, but that for export shipments from Ottawa to Montreal, they must put into effect within one week, a tariff establishing an export rate from Ottawa to Montreal of 5c per hundred lbs. and rates from points governed by the Ottawa rate, in proper relation thereto.

Toronto Lumbermen's Club Looking for Quarters

During the past fortnight, the Lumbermen's Club of Toronto has held a number of luncheons and the members have discussed very thoroughly the whole club situation. This has led to a very general and definite conviction that the formation of a club is a wise and important step. The discussions have centered about the various kinds of lumbermen's clubs existing in other countries and the best kind of a club to organize in Toronto. At present, the general opinion is in favor of a club starting out very largely as a social organization, having rooms in connection with some hotel or restaurant where luncheon may be served daily, and where members may be able to meet one another or bring their out of town friends for luncheon or to meet other members of the trade. A special committee is at present looking carefully into available quarters in the business part of the city, and, as soon as they have a satisfactory report to present, it is expected that a definite step will be taken in the way of organizing the club and establishing it in its own quarters.

Finds Ontario Hardwood Trade Optimistic

Chas. O. Maus, Atlantic City, N.J., eastern representative of the Hyde Lumber Company, South Bend, Ind., was in Toronto recently on a business visit. The Hyde Lumber Company manufacture hardwoods, particularly cypress, oak and gum, and operate mills at Arkansas City, Ark., Millikin, La., and Lake Providence, La. Up to the present, the Hyde Lumber Company have been content with covering the Ontario trade by correspondence. Their business in Ontario has grown so satisfactorily that Mr. Maus will now make regular visits to Ontario and call upon the trade personally. In conversation with the Canada Lumberman, Mr. Maus said that he found a very optimistic spirit prevailing among the Ontario trade at present. They were buying fairly well and assured him that a renewal of good times could be counted upon in the near future. "The situation as I found it," said Mr. Maus, "has been good, and I have been very much pleased with trade conditions—more particularly when comparing Canadian trade conditions with those of the United States. While the trade in the United States has fallen off somewhat, this is more due to the dissatisfaction of the railroad companies in regard to freight rates, the Mexican war situation, and the over-buying by most of the large manufacturing concerns a year and a half ago. These firms are now retrenching and I look for renewed heavy buying in the United States some time next fall. The enquiries from Canada have been so encouraging that we have decided to make our initial personal visit here and I assure you that we have found conditions very pleasant."

Mr. Maus, in conclusion reiterated his views in regard to the better feeling existing in Canada and expressed the great pleasure it had given him to become personally acquainted with a number of Canadian lumbermen, for whom he had many complimentary remarks to make.

Forest Products Exposition Successfully Opened

The first Annual Forest Products Exposition, held under the auspices of the National Lumber Manufacturers' Association, opened in the Coliseum at Chicago on April 30th. The proceedings of the opening night were in the nature of a reception and "dress rehearsal." Many invited guests were present representing important associations connected with the lumbering industry. The transformation of the great Coliseum building was complete and wonderful, and the decorations were remarkably beautiful. The entire space in the main building was filled with interesting exhibits arranged with great care and skill, conveying forcible object lessons in connection with the

value and importance of wood. Very complete arrangements were made for the entertainment of visitors who travelled to Chicago to attend the exposition. The Lumbermen's Association of Chicago made the visitors welcome at their booth and special committees were appointed to look after the entertainment of visiting lumbermen on the different days of the exposition. Among the important exhibits at the exposition the following were particularly noticeable: Western Pine Manufacturers' Association; Hardwood Manufacturers' Association of the United States; Yellow Pine Manufacturers' Association; E. C. Atkins & Company, Saw Manufacturers; Northern Pine Manufacturers' Association; Southern Cypress Manufacturers' Association; North Carolina Pine Manufacturers' Association; Gum Lumber Manufacturers' Association; National Association of Box Manufacturers; West Coast Lumber Manufacturers' Association; Redwood Mill Owners' Association; The Oak Flooring Manufacturers' Association; The United States Forest Service, and The Western Forestry Conservation Association. In the annex to the Coliseum a number of wonderful moving picture shows were installed. For many months skilled photographers have been busy collecting for these exhibits. They illustrated every phase of the lumber industry from the felling of the giant trees to the completion of the finished product.

Large B. C. Timbers for St. John, N. B.

An interesting shipment of long Douglas fir timbers was recently made by the Canadian Western Lumber Company, Fraser Mills, B.C. The timbers were shipped from the Pacific to the Atlantic Coast, on one line of railway, making the journey in 24 days. The accompanying illustration shows these timbers, shipped in a twin-load, when they were leaving the plant of the Canadian Western Lumber Company. Their destination was St. John, N.B., where they are now be-



From Fraser Mills, B. C. to St. John, N. B.—An Interesting Shipment of Long Douglas Fir Timbers.

ing used for anchors on the large dredges working on the St. John harbor. These timbers are 18-in. x 24-in., 20-in. x 20-in. and 24-in. x 24-in., 60 ft. and 70 ft. long. The logs were taken from "the last best stand of timber in the world"—i.e., the Douglas fir of Vancouver Island. They were rafted from Vancouver Island to the booms of Canada's largest sawmill, that of the Canadian Western Lumber Company, and there manufactured for shipment to St. John. The Canadian Western Lumber Company are equipped to cut timber 120 feet in length and have reduced to lumber logs measuring 9 feet in diameter.

Increased Shipments from Pacific Coast to England

The Timber Trades Journal, London, England, in its issue of April 25th has the following to say regarding shipments of Pacific Coast Lumber to the United Kingdom:—

"While the gradual development of Pacific Coast lumber exports to this country is known, it is not largely recognized what rapid strides are being made. We have before us a return showing the shipments from California, Oregon, Washington, and British Columbia during 1913, which shows that vessels were chartered for United Kingdom ports, including, London, Greenock, Liverpool, Newport, Newcastle, Glasgow, Queenborough, Swansea, Belfast, and sundry other ports, for an aggregate of no less than 38,668,686 superficial feet. Of course, a certain quantity of this found its way to the Continent, but the total shows the large proportions which this trade has now assumed. By the way, the "Harold Dollar," now being built for the Robert Dollar Steamship Company, of San Francisco, will be the largest lumber-carrying vessel in the Pacific service, having a capacity of 5,000,000 ft."

Practical Belt Lacing Directions

Description of the "Hinge" and the "Straight stitch" Methods—The Two Most Common Plans

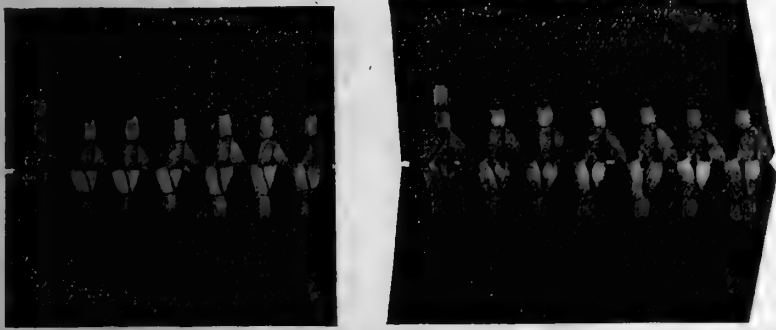
There are several methods of joining the ends of a belt by means of rawhide lace leather. The two most common and practical plans for lacing belts are known as the "Hinge" lacing and the "Straight Stitch" lacing. Whatever style of lacing is adopted, it is imperative that the ends of the belt to be joined should be cut at exactly right angles to the sides of the belt, and that the lacing be under uniform tension in order that the belt may run absolutely true when put into operation. Cut the ends of the belt to be joined perfectly true with a tri-square. Punch two rows of holes in each end of the belt. The holes in the second row should be punched directly back of those in the first row. The holes in both ends of the belt should also be exactly opposite.

No holes should be less than one-half inch from the edge of the belt, nor nearer to the end than one-half inch. The holes should be spaced about three-quarters of an inch from centre to centre.

Directions for Lacing

Put the lace through hole No. 5, drawing ends even. Butt the ends of belt together and pass each end of the string of lace between the ends of the belt as shown in the following illustration.

Pass No. 1 lace up through hole No. 8, down between ends of



The "Hinge" lace looks alike on both sides and gives very pliable joints.

belt, up through No. 5, down through No. 2, up through No. 5, down between ends again.

Put lace No. 2 down through hole No. 8, up through No. 11, down through No. 8, up between ends, down through No. 4, up between ends, down through No. 7, up between ends, down through No. 4, up through No. 1, down through No. 4, up between ends, down



The "Straight Stitch" on Grain (left) and Flesh sides of Belt.

through No. 7, up through No. 10, down through No. 7, up between ends, down through No. 4, up through No. 1. Punch hole with belt awl and fasten in usual manner directly back of hole No. 1.

To finish the other side, put lace No. 1 through hole No. 9, down between ends, up through No. 6, down between ends, up through No. 9, down through No. 12, up through No. 9, down between ends, up through No. 6, down through No. 3, up through No. 6, down between ends, up through No. 9, down through No. 12, then fasten end of lace back of hole No. 12 in the usual manner.

The illustration used with these instructions shows only three holes to each row. The same instructions apply whenever any odd number of holes are required to each row—simply start with the centre hole.

When the width of the belt requires the use of an even number of holes in each row, begin with either one of the two centre holes and follow the instructions already given.

Cut the ends of the belt to be joined perfectly true with a tri-square. Punch one row of holes in each end of the belt. The holes in both ends should be exactly opposite.

No holes should be less than one-half inch from the edge of the belt, nor nearer the end than one-half inch. The holes should be spaced about three-quarters of an inch from centre to centre.

Directions for Lacing

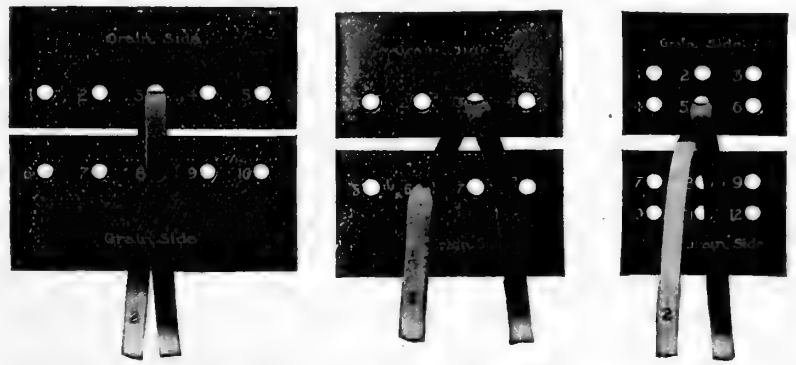
Butt ends of belt together. Put lace through holes No. 3 and No. 8 from the grain side, drawing ends of lace even, see the following illustration.

Put No. 1 lace up through hole No. 3, down through No. 8, up through No. 4, down through No. 9, up through No. 5, down through No. 10, up through No. 5, down through No. 10, up through No. 4, down through No. 9, and up through No. 3. Punch hole with belt awl and fasten in usual manner directly back of hole No. 3.

Put lace No. 2 up through hole No. 7, down through No. 2, up through No. 6, down through No. 1, up through No. 6, down through No. 1, up through No. 7, down through No. 2, and up through No. 8. Fasten lace in usual manner directly back of hole No. 8.

The illustration used with these instructions shows five holes to each row. The same instructions apply wherever any odd number of holes are required to each row—simply start with the centre holes.

When the width of the belt requires the use of an even number



Starting a "Straight Stitch" with odd number of holes.

Starting a "Straight Stitch" with even number of holes.

Starting a "Hinge" lace.

of holes in each end of the belt, lace in accordance with the following directions:

Butt ends of belt together. Put lace up through holes No. 3 and No. 6, from flesh side (see illustration), drawing ends of lace even.

Put lace No. 1 down through hole No. 7, up through No. 4, down through No. 8, up through No. 4, down through No. 8, up through No. 3, down through No. 7, up through No. 2. Punch hole with belt awl and fasten in usual manner directly back of hole No. 2.

Put lace No. 2 down through hole No. 2, up through No. 5, down through No. 1, up through No. 5, down through No. 1, up through No. 6, down through No. 2, and up through No. 7. Fasten lace in usual manner directly back of hole No. 7.

The illustration used with these instructions shows only four holes to each row. The same instructions apply whenever any even number of holes are required to each row.

An Important Timber Transaction

One of the largest land transactions recorded in Quebec province was announced recently, involving the purchase by the Chicoutimi Pulp Company, which is now turning out six hundred tons of wet pulp daily, of one of the largest areas of freehold property in the world. The company has purchased from the Atlantic, Quebec & Western Railway 400,000 acres of freehold pulp wood lands, which was formerly given to the railway for the construction of 100 miles of railway line, extending from New Carlisle to the Gaspé Basin. This area is located along the branches of the Upper Peribonka River, a stream a mile wide in some places and running into Lake St. John.

It is said that the company selected the acquired virgin forest lands along the northern sections of this river in preference to areas further south, for the reason that while a great broad river connected them with the south, no railway within many miles made forest fires at all probable. A second block of freehold land now in possession of the same company, amounting to 110,000 acres was accorded the Roberval & Saguenay Railway, which has already built forty miles from Ha Ha Bay to Chicoutimi, and will continue the same line on to a further distance of sixty miles next year, to the Mistassini River

Mountain Lumbermen Hold Business Meeting

A general meeting of the Mountain Lumber Manufacturers' Association was held at Nelson, B.C., recently, at which it was reported that American competition was still very keen in the Pacific provinces, the imports for the first three months of 1914 having been about equal to those of the corresponding period in 1913. The opinion was very generally expressed that no relief could be expected in this regard until the Dominion Government would give protection to the industry by means of an increased tariff.

Reports which were presented showed that the information bureau of the association had proved very valuable. The bureau gathers reports of all business booked by Canadian operators and distributes it to the members of the association. In this way an excellent idea is secured of market conditions in the Prairie Provinces.

The members present expressed their gratification at the order of the Railway Board which had recently been passed, conforming the western freight rates judgment which placed main line points on the same basis as those in the Crows Nest from a lumber shipment point of view. Formerly the main line shippers were charged a higher rate on account of the haul through the Field tunnel.

A report was presented to the effect that the Canadian Pacific Railway department of natural resources is making special efforts this year to increase settlement along the company's lines. It is expected that this policy will prove advantageous to the lumbermen by stimulating the demand for their products.

Mr. W. A. Anstie, managing director of the Forest Mills of British Columbia, Limited, Revelstoke, B.C., was appointed to represent the association at the conference which is to be held between lumbermen and forestry department officials at Victoria for the purpose of discussing the administration of the new royalty act.

The association refused a request from a large retail lumber firm on the Prairies which asked that the Mountain lumbermen should discontinue the practice of selling direct to elevator companies, and that they should make their sales through the retailers.

The association commended the action of Hon. W. R. Ross, Minister of Lands, in arranging for efforts to increase the export markets for British Columbia lumber and timbers.

Mr. N. J. Eastman was appointed grading inspector for the association. Mr. Eastman has had a varied experience in the lumber business in the mountain district of British Columbia, and, until recently had been with Mr. W. C. E. Koch, the Slocan Valley Lumberman.

Lumbermen Co-operating in Vancouver Pageant

It is expected that all the leading lumber mills in New Vancouver, B.C., will be represented in the lumbermen's pageant parade to be held in connection with the Pacific Coast Ad Men's convention on June 12th. The Canadian Western Lumber Company, which operates the largest plant in the Dominion, will exhibit floats in the parade, and the manager has signified his wish to co-operate in securing animated pictures of the mill and plant in action. The promoters of the parade are arranging for a series of views of the different branches of the lumber industry, which will be shown with the photographs of the parade. Panoramic views of the various mills on False Creek and Burrard Inlet are being taken. These, in addition to showing the extent of the timber industry, will also be a valuable publicity factor in advertising the city, it is pointed out. Arrangements are being made with leading film exchanges for handling the sets of pictures and distributing them all over the American continent and Europe.

Wider Field for Plain Oak Furniture

Plain oak is coming back after years of neglect. Little of it has been in evidence for a long time. Fashion dictated the use of other woods, but fashion in that line has about run its course, and indications point to an early and general return of plain oak in the furniture trade, says Hardwood Record. Quartered oak, also, is due for wider employment in the manufacture of furniture. That is, the oak is extending its field of usefulness in most kinds of furniture. For some years this wood has been confined largely to the office and the dining room. Desks and cabinets of oak have been manufactured in large quantities and in numerous styles, and dining tables, sideboards and other appurtenances of the dining room have followed that fashion. In the making of other classes of furniture this splendid wood was accorded scant courtesy. Birch, gum, maple and other hardwoods had the center of the stage. These are fine woods, but no finer than oak, and the superior place accorded them was dictated by fashion, which is often as much a law in trade as in the social affairs of men and women.

It, therefore, becomes a matter of quiet satisfaction to note a tendency on the part of oak to come into the general furniture field again. Plain and quartered oak alike have a place, and by right they never ought to have lost any part of that place. Their substantial qualities ought to place them among woods like gold among metals, superior to vicissitudes of fortune, and beyond the fickle influences of fashion.

The tendency is indicated by the appearance of oak furniture in show windows, where it is more prominent than it had been in a long time. This is the situation, not in a single city or manufacturing district, but it is so general that the movement cannot be defined as restricted or local. A popular form of library table has a quartered veneer top, while the frame is made of solid plain oak. The table is not elaborately finished. It is simply a substantial piece of oak for the library. Many pieces on display are finished natural and they afford pleasing contrasts with some of the deep-stained woods.

Advice to Woodworking Machinery Buyers

In buying woodworking machinery one or two considerations present themselves, and cannot, in fact, be ignored with impunity. The first in importance is rigidity of construction, a very necessary condition on account of speed of working, the quality of the work, and the liability to breakdown, with attendant cost of repairs and loss of production while the machine is undergoing repair.

It is very seldom—and only in special cases where machines are required for temporary use—that it is a business proposition to sacrifice rigidity to so-called "economy" in first cost. This stricture applies with additional force to the buying of second-hand machinery. I quite agree with a writer who said recently that "It is better to borrow money to buy new machinery than to lose money operating machines that are out of date in the matter of economy of production; but the best plan is to set aside a machinery fund each year before declaring a dividend, for then it is easy to keep up-to-date without having to go in debt."

And machines are quickly out-of-date now-a-days, because competition is always demanding something better of the engineer, both on his own account and also to enable the woodworker to increase and improve the production of the machines. Moreover, rigidity is required, not only because of the greater security in continued high outputs, but also because the quality of the work is best with machines running at the highest speed.

In deciding the size of the machine equipment, or the size of a particular machine, regard should be paid first to the size and amount of work required to be produced. As a rule it does not pay to instal a machine beyond the size of the work, because both the costs on account of power and upkeep are made unduly high. And even if an increase in production is anticipated it is rather the better way to put down two machines.

When buying machinery of any kind, it is generally the course of wisdom for non-technical purchasers, with only a limited knowledge of engineering, to consult a third party who possesses this knowledge. We are, however, better placed in the woodworking industry. Our engineers (as far as the knowledge of the writer goes) are reliable. But a word of warning is necessary. Don't order a machine upon your own judgment alone unless you are quite sure—quite confident—your judgment will not be called into question later—perhaps by your foreman or the man who has to work the machine.

In buying machinery it is always advisable first to consult the operator (through his foreman), and then consult—not instruct—the engineer. It is surprising what help—what knowledge that can subsequently be turned into hard cash—can be obtained freely of the engineer if you frankly state your requirements and repose some confidence in him.

Many proprietors of sawmill, joiners' shops, etc.—particularly medium or small plants—still prefer to plan their own machine layout. It is quite unnecessary to-day, and rather foolish to boot, because, whether a new mill is afoot, or the simplest addition to an existing plant, engineers prefer to lend their expert assistance. It is all a matter of business. Simply stated, the position is that it pays the engineer to make a fast friend of the sawmill proprietor, and, incidentally, the sawmill proprietor has everything to gain and nothing to lose by such business friendship.

My advice to leave the lay-out of the shop to the engineer will not, I know, be acceptable to all. And there is something to be said for the other view. There is a keen pleasure to be derived in laying out one's own shop, especially when the planner has a liking for organization.

A good way to proceed is to measure up the floor space available, and prepare a drawing set out $\frac{1}{4}$ -in. to the foot. It is highly important that this drawing be absolutely correct in the smallest detail, particularly in showing doors, windows, pillars, stairs, hoists, recesses, etc. The need for knowing the exact position of any of these items will soon be seen. Now measure up all machines, taking their overall dimensions, including the space required for the largest stock any particular machine will take. For instance, with the Log Band Saw take the extreme travel of the table both ways, plus an allowance for manipulating the log and cut boards. Draw a plan of each machine with these dimensions to the same scale as the mill plan, on thin cardboard. Cut the shape out, and put a pin through the centre. Now you can plan to your heart's content, moving the machine shapes

where you will, fixing them temporarily by means of the pins, until you have finally settled the arrangement. Then past them down on the mill plan.

In laying-out the machines, drives which run through floors must not be overlooked, and where machines are to be motor-driven, the latter, of course, must be added in proper relative position to the cut-out machine shape. Again, the crane must not be forgotten, and machines fed by it must be placed accordingly.

Another important factor arises in the arrangement of aisles. Ample provision should be made for the movement and conveyance of stock according to the extreme size of the latter likely to be at any time in any given position.

And finally, do not forget that the arrangement should provide for machines travelling straight forward, or directly around in a circular plan. What I mean is that no work should double on its track. Any work which returns and has to cover the same ground later for completing, is subjected thereby to lost motion, and lost motion means less profits. And when you have completed your plans, show them to your engineer, and ask him to revise them.

"Time is of the essence of the contract." This quotation is particularly apt considered in relation to the buying and selling of machinery. "Time" is the "bete noire" of the engineer. "So many chance occurrences crop up to delay delivery, and the buyer is so unreasonable," says the engineer; while the buyer makes retort, "You'll promise anything to get the order." As in most departments of life the truth lies in the via media. The engineer is naturally anxious to meet a prospective buyer's wishes in regard to delivery, and is frequently led to promise more than it is possible to fulfil.

There would be fewer disputes under this head, however, if the buyer stipulated for a definite delivery date, and not to be content with "about six weeks," or some such nebulous phrase. On the other hand, it is in the best interests of the buyer to be reasonable should the engineer desire a little longer than the contracted time. Accidents will happen, and it is not wise to rush the completion of a machine or plant. After all the standardization that has taken place in machine shops during the past ten years, the day of prompt deliveries seems as far off as ever.

The fact is that the amount of re-designing which has been done during the same period has barred out repetition work, and the making of standard machines to stock. By-the-way, is there such a thing as a "standard" woodworking machine? This question would form the subject of what should prove a highly instructive discussion. Except for the simplest operations—such as plain sawing, cross-cutting, etc.—it does not appear that strict standardization is to the interests of the machine woodworker. Of course, the engineer can "standardize" a frame, a spindle, a bearing, and similar details regularly required, of given dimensions. But to standardize a complete planer and matcher, for instance, as is being attempted to-day, and to refuse to deviate in the slightest particular to meet the special requirements of a woodworker who desires to meet competition in his own way, by, perhaps, an additional adjustment, or a slight alteration—such refusal is not to the interests of the woodworker, and the tendency should be resisted. Engineers have their labor troubles, and desire to lessen cost production, no doubt, but are not the woodworkers to have consideration "by the same token?" By which it will be seen that the astute buyer will observe whether his engineer is more concerned in selling direct from his catalogue than he is in the operations the buyer desires to perform.

How many machines are ordered without saws, cutters, or other necessary tools? The engineer's remarks on this "kink" would be interesting. The best machine, of course, cannot work without a tool of some kind, but by what process of reasoning a buyer lays out good money in, it may be, a first class machine, and then imagines any old tool will do—the workman must "make good"—is incomprehensible. A new machine installed under such conditions might quite conceivably do less work than the old. The operator may by long use have discovered the best way of getting the most out of the old machine, in humouring it, and if the new is not equipped with the tools the engineer intended, it is not to be expected that other than disappointment will ensue. Good tools, and plenty of them, are the stock of efficiency in any shop, and a number should always be ordered with the machine, because when so ordered they are tested in the machine by the engineer—at least in most cases. With a stock of good tools in the shop there need be no lengthy stoppage on their account. It is false economy to have any lack of good tools.

Reference has been made to the necessity of spare tool equipment, and it must not be overlooked that alongside this is the equal necessity for proper provision for grinding, sharpening, and setting. The old method—especially where new type machines are installed—is an anachronism, and its presence displays a lamentable lack of courage on the part of the person responsible—usually the office. What is the particular advantage of a high-speed machine if tools are prepared by machinemen in the old manner? How much more work is being turned out with the more expensive machine if it is standing one-half

the day? Either "go the whole hog," or stay in the rut. There is no half-way house—not for long. There are very few mills or shops in which the advent of a properly qualified saw sharpener and tool iron grinder would not be a profitable asset. And when installed, let him be responsible not only for keeping the saws and tools ready for use, but also for handing them out and recording them, so that it shall not be possible for tools to be stored away by machinemen who are bitten with the "dog in the manger" spirit. If there is a manager who is dissatisfied with the number and length of stoppages of the machines in his mill, and who is at the mercy of a system which permits of every machineman taking care of his own tools, let him try the method I advocate—let him instal a capable man, make him responsible, and provide him with the necessary apparatus (it is not expensive). Then let such manager note the increased output, and balance same against the expenditure incurred.—Timber.

Canada's Foreign Trade in Wood Products

Exports of forest products from Canada during the month of February, 1914, were valued at \$1,961,206 as compared with \$2,212,485 during February, 1913. For the eleven months ending with February the exports were valued at \$40,097,151, as compared with \$40,895,709 during the eleven months ending February, 1913.

The exports of forest products during February included the following:—pine deals, \$69,610; spruce and other deals, \$298,076; laths, \$57,093; planks and boards, \$742,953, of which \$629,430 was to the United States; shingles, \$574,476, of which \$553,148 was to the United States; pulpwood to the United States, \$535,931; wood pulp chemically prepared to the United States, \$240,437; wood pulp mechanically ground to the United States, \$174,298.

Imports of forest products coming into Canada free of duty during February, 1914, were valued at \$788,711. For the eleven months ending February, the value under this heading was \$15,125,206. The imports of free forest products included the following:—hickory and oak spokes, \$18,936; fence posts and railroad ties, \$105,218; logs and round unmanufactured timber, \$19,768; mahogany, \$16,639; oak, \$155,035; pitch pine, \$119,408; white ash, \$17,065; planks, boards, etc., dressed on one side only, \$216,147.

National Hardwood Convention Programme

The 17th annual convention of the National Hardwood Lumber Association will be held in Buffalo on June 18th and 19th. The first day's programme includes the reports by officers and committees in the morning, and a special trip to Niagara Falls in the afternoon. On the second day, the report of the Inspection Rules Committee will be presented, an address will be delivered by A. E. Trefz, Field Secretary of the Chamber of Commerce, U.S.A., and election of officers and directors will take place. On Friday evening, June 19th, a complimentary banquet will be given at the Hotel Statler, which is to be headquarters for the convention.

Special Timbers for Aeroplanes

Toronto, May 4th—Editor Canada Lumberman:—We notice in the Canada Lumberman of April 15th an article entitled "The Commercial Importance of Spruce," by R. G. Lewis, and on page 37 there are a few sentences commending spruce for framework for aeroplanes. We have had enquiries for "silver spruce" for aeroplane construction from Australia. We see, for the article referred to, that spruce can be obtained in Canada for aeroplane construction. We would be much obliged to you if you could give us any further information regarding where we can obtain this spruce.—Imperial Export Company, Limited.

Mr. R. G. Lewis, the writer of the article referred to, reports in reply to the above question that "Silver Spruce" is not an accepted common name and it would be impossible to say just what species is referred. In New York State where the aeroplane industry is most important the wood used is about two-thirds native red spruce cut within New York State itself. This is the same species that is cut in our own Maritime Provinces (*Picea rubra*).

The "Struts" or "spreaders" are made from this red spruce from West Virginia or from Sitka spruce from Oregon. This is probably the spruce referred to by your correspondent as "Oregon Silver Spruce," although I have never heard of Sitka spruce under that name. Undoubtedly Sitka spruce is the best material for this purpose, as it can be obtained in larger dimensions than any of the other spruces, clear of defect and possessing the essential straight grain. This wood can be obtained from almost any of the Coast Mills in British Columbia, but would of course, have to be selected with great care, by one who understood the use to which it was to be put.

"The following firms in New York State manufacture aeroplanes or parts thereof:—American Aeroplane Supply House, Hempstead, N.Y., International Aeroplane Construction Company, Jamaica, N.Y., Beekman Sash, Door & Woodworking Company, New York, N.Y.

If any readers of the Canada Lumberman can furnish further information upon this subject, we will be pleased to forward it to the enquirers.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Hauling Lumber Stocks With Electric Locomotives

The hauling of stocks of lumber in connection with any large manufacturing or selling company is always one of the most important problems to be solved. Local conditions have a great deal to do with the method adopted. Of late years, many large companies have found that the most efficient method of performing this work is by means of a specially designed locomotive drawing car-loads upon tracks which



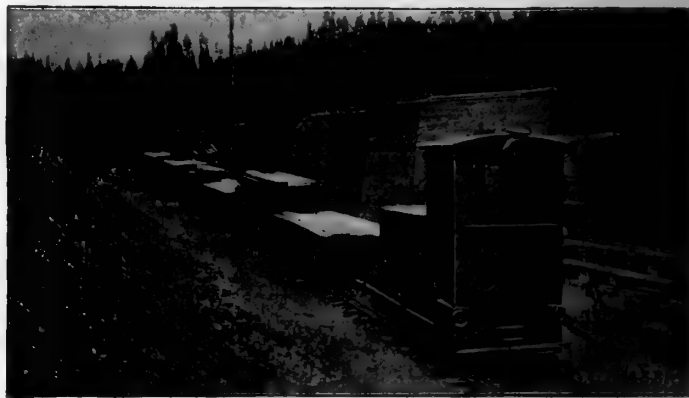
Jeffrey 7 Ton Storage Battery Locomotive hauling a train load of lumber containing 70,000 feet.

are connected with the railroad tracks by means of which the company makes its shipments. One of the most up-to-date installations of a service of this nature has been put in by the Potlatch Lumber Company of Potlatch, Idaho. The equipment for this haulage system was furnished by the Jeffrey Manufacturing Company of Columbus, Ohio.

From the accompanying illustrations one can gather at a glance how useful and efficient this system is. One of the illustrations shows a Jeffrey 7-ton storage battery locomotive in operation at this plant. This locomotive, small as it appears, is hauling a train containing no less than 70,000 feet of lumber. The locomotives are used for hauling trains of green and dry lumber between the sawmills, sorting sheds, dry kilns and loading docks. The Potlatch Company discarded horses

and mules long ago because their work was too heavy for animal haulage. Steam and gasoline were out of the question on account of the fire risks and the company decided upon the use of electric locomotives with both trolleys and storage batteries.

The layout of the tracks in the company's yards is shown by the accompanying diagram. No less than 50 miles of yard tracks have been installed. On hauls averaging three-quarters of a mile, each loco-



Jeffrey cab equipped storage battery locomotive at the Potlatch plant.

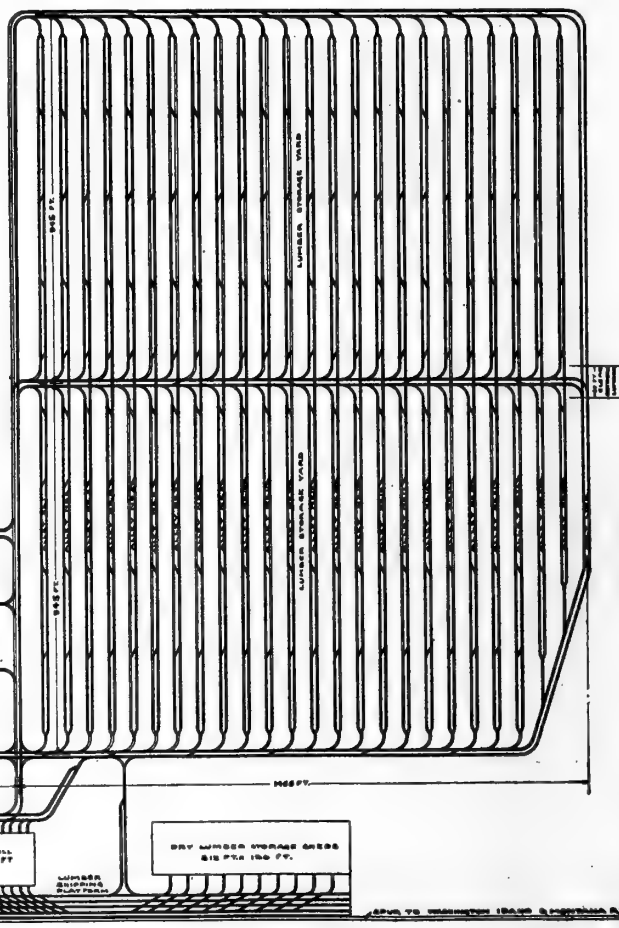
motive is doing as high as 450 tons miles of lumber per day of ten hours, on a single charge with a short extra charge during the noon hour. The records of the company show that this equipment is resulting in a net saving of 40 per cent. on the cost of performing the same work with animal haulage. Another of the illustrations shows a Jeffrey cab-equipped storage battery locomotive at the Potlatch plant. These locomotives are also adapted for industrial haulage in large manufacturing industries. They are also used in copper smelting plants, straw board factories, cotton, flour and paper mills and in connection with many other plants where trolley wires are objectionable, or where the use of other forms of locomotives is prohibited on account of the fire risks.

Wherever a considerable portion of the track is equipped with a trolley wire, or where the service combines a long haul with a considerable amount of switching, a combination trolley and battery locomotive is recommended by the Jeffrey Manufacturing Company. The use of the battery eliminates complicated trolley wire construction at the switches and sidings and avoids the necessity for watching the trolley when crossing frogs. It also allows the locomotive to run over spurs and into buildings at any point along the line.

The Jeffrey Manufacturing Company devotes attention especially to the working out of plans for the operation of systems of this nature. To insure the success of a storage battery installation every feature in connection with it should be carefully investigated by someone who is familiar with this type of locomotive. A thorough study of the total amount of work to be done is very important. In a large number of cases the total amount of work is very much over-estimated. Generally, the size of the locomotive can be determined by the grade of the track and the maximum train load to be hauled.

An Efficient Gas Plant for Sawmills

One objection to the use of gas plants in isolated sawmills and woodworking plants is the impossibility of securing supplies of coal for the producer equipment except at prices which are commercially prohibitive. A gas producer plant which allows of the use of lumber (much of it of little value) as fuel, should appeal to many lumbermen. The George Anderson Company of Canada, Limited, Montreal, are manufacturers of gas engines and also of suction gas plants which automatically make gas from charcoal, coal, or coke, the former requiring the largest grate area. Wood is a very poor steam raiser, but when converted into charcoal it makes an excellent fuel for the suction gas producer. The cost of suction gas for generating power compares favourably with that of electric current and steam. The makers state that the running costs are one-quarter those of electricity on a basis of 2 cents per unit, one-third those of the steam engine with coal at \$2.50 per ton, and half of the gas engine using town gas at 50c per 1,000 feet. It is also stated that the process is automatic, and resolves itself into periodical stokings, the plant being easily handled. This



Plant of the Potlatch Lumber Company—showing the plan and arrangement of the company's buildings and tracks.

type of plant is in successful operation in Australia, South Africa, South America, Spain, etc., where charcoal is the only available cheap fuel.

One of the good points of the engine is the simplicity of the design and the accessibility of the parts. It is easy to start and to handle. The smaller sizes are started by hand, while engines over 30 h.p. are started by hand pump which injects the first or starting charge, which may be petrol or compressed air.

Canada Machinery Corporation Adds to Its Catalogue

The Canada Machinery Corporation, Galt, Ont., have issued two new bulletins, Nos. 303 and 504, which are to be added to their catalogue of woodworking tools. No. 303 is a heavy moulder, to work 10 in. or 12 in. wide and is mounted on a substantial base. It is heavy and substantial in all parts and capable of doing the finest work. At the same time it is extremely convenient in adjustment and can be set up for any job in minimum time. The company have paid particular attention to the feed in this machine and believe it has a stronger and more powerful feed than any other of its type. Special attention has also been given to guarding the machine wherever possible, to insure the safety of the operators.

No. 504 is a tenoner, single or double head, with or without copes or cut-off saw, designed for light and heavy tenoning, and taking stock 4 in. thick and 17 in. in width. The length of a single cut is $5\frac{3}{4}$ in., and of double cut, $8\frac{1}{2}$ in.

Modern Equipment in Donald Fraser & Sons Mills

The accompanying illustrations show some of the new equipment which has been installed by Donald Fraser & Sons, Limited, Cabano, P.Q., and Fredericton, N.B., in their various mills. One of the illustrations shows a Four-Saw Gang manufactured by Wm. Mershon & Company, Saginaw, Mich., standing in the shop, all complete and ready for shipment. The other illustration shows one of the Mershon Twin Saginaw Band Resaws. These mills are all provided with wheels 66-in. in diameter and they carry 8-in. saws. The twin band resaw in connection with the sawmill, is operated in the same manner as the Mershon single vertical resaw, which is so well known that it needs no description. The twin band resaw illustrated, is provided with the same feed works and means for shifting and locking the feed rolls in any desired position with reference to the saw blade. It is also possible, with very little effort to space the saws any distance apart. If the log mill is sawing 3 ft. deal, the rolls are spaced 3-in. apart and the saws 1-in. apart, and in this condition the 3-in. deal will be transformed into three 1-in. boards. If the next flitch that is dropped from the log mill is 6-in. thick, it may be sawn in any way desired. Thus, the rolls may be spread 6-in. apart and the saws, say 4-in. apart, and the result will be two 1-in. boards and one 4-in. plank; or, the rolls may be shifted to one side and the saws spaced 2-in. apart, and a 1-in. board, a 2-in. plank and a 3-in. deal be the result.

This twin band resaw, in short, can be manipulated in any man-



Mershon Four-saw Gang at Plant of Donald Fraser & Sons, Limited.

ner that is desired. The saw is made to spread 6-in., in which case, of course, one saw only need be used. Equipment of this class enables a manufacturer to combine maximum efficiency with extreme economy, through the use of saw blades that are thinner than standard.

Donald Fraser & Sons, Limited, in their various plants, have placed orders recently for two Mershon Twin Saginaw Band Resaws, and one Four-Saw Gang, similar to the one illustrated in the shop interior, and differing only from the Three-Saw Gang, illustrated in another part of this paper, in that it is comprised of four units rather than three. Previous to this they also purchased and installed a Seven-Foot Twin for canting or sawing their logs. Logs are canted on the large Twin and then delivered to the Four-Saw Gang. In their other mills the same results are practically obtained by the use of single and twin roller feed resaws. The machines are worked out in every detail, the Gangs and the Seven-Foot Twin being supplied with air cylinders for setting the saws to cut logs or flitches into any thickness of boards, plank or deal required.

The equipment described above is also illustrated and described in the new sawmill catalogue issued by Wm. B. Mershon & Company. This catalogue is intended for distribution among those who are interested in modern sawmill equipment. It may be had by writing to the company at Saginaw, Mich.

Personal Paragraphs

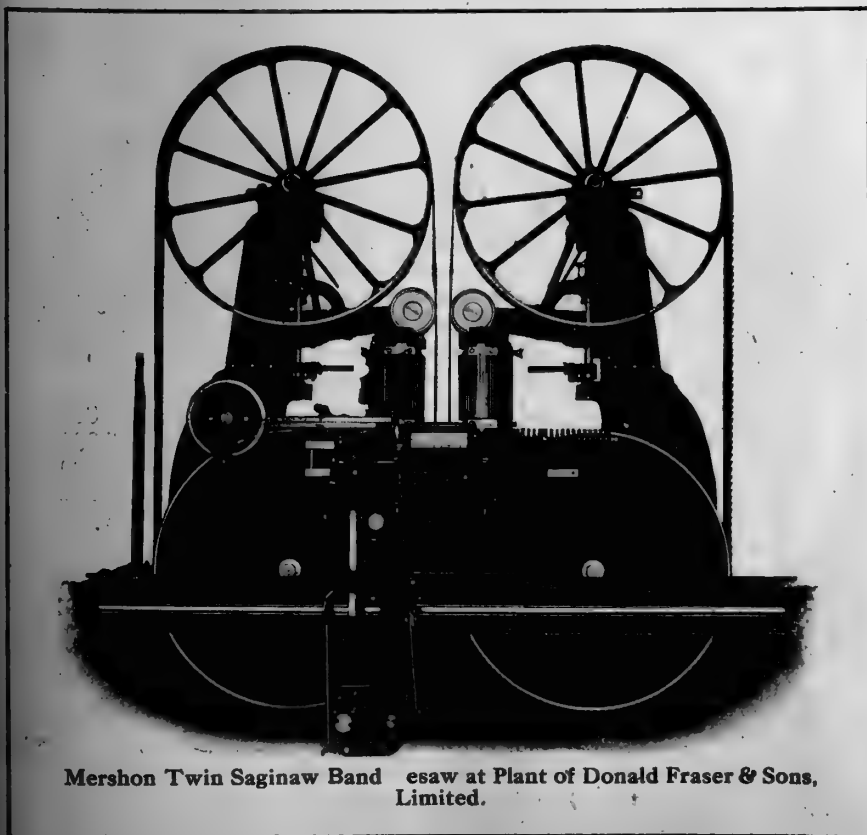
Mr. William Rutherford, of the William Rutherford Sons Company, Limited, and Mr. W. J. Sadler, of Sadler & Haworth, have been elected members of the executive committee of the Montreal branch of the Canadian Manufacturers' Association.

C. C. Muir, of Nanaimo, B.C., has taken over the general management of the Island Lumber Company, operating at Duncan, B.C., about half way between Victoria and Nanaimo. He was formerly secretary of the New Ladysmith Lumber Company, Nanaimo.

Mr. C. C. Mendham who has been connected with the outdoor staff in Toronto of the Herbert Morris Crane & Hoist Company, Limited, has now been appointed Resident Engineer in Berlin for the same company. This appointment is in line with the policy of the Herbert Morris Crane & Hoist Company which consists, not only in carrying large stocks of their manufactures to ensure prompt delivery, but in furnishing also a consulting engineering service for advising on the best equipment for any given set of conditions.

Wm. C. Purves, St. Stephen, N.B., formerly a well-known lumberman, of St. John, N.B., and also of Baring, Me., and Calais, Me., died at St. Stephen recently. At St. John, N.B., Mr. Purves was a member of the firm of Purves & Warner. About fifteen years ago he retired from the lumber business and conducted a very successful wholesale grocery and coal business at St. Stephen.

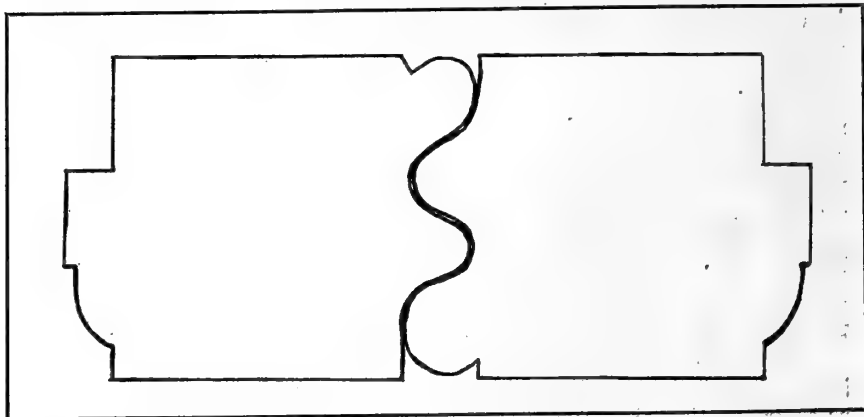
Mr. W. J. Foye, of the McShane Lumber Company, Omaha, Neb., visited Toronto recently on business. The McShane Lumber Company turn out about 150,000,000 feet annually and a good deal of their product finds its way into the Ontario markets. Mr. Foye reported that he had been pleased with his Ontario trip and that the company had recently secured some very fair business in this province.



Mershon Twin Saginaw Band Resaw at Plant of Donald Fraser & Sons, Limited.

A Lock Joint for Casement Sash

North Cobalt, Ont., Editor Canada Lumberman: I am sending you a sketch of a lock joint for casement sash, which may interest some of your readers. I have used these joints with great success and find that they work like gears. Only one cutter and one setting



of the machine are necessary, providing the cutter is well made. In operating the machine the face side of the sash is reversed alongside of the gauge of the buzz planer. If the cutter is well made, the joint will work free, like a set of gears and will not press the sides of the frame or jambs.—J. Joannis.

Filer's Diplomacy

An old filer, long experienced in the game, attributes much of his success to the fact that he always sought the co-operation of the sawyer. Young filers will do well to profit by this advice. Even if you know your business from A to Z, it will sometimes get you more to ask the sawyer what he thinks. He might suggest a slightly different shaped tooth, or a deeper gullet, and when you send him a saw prepared the way he suggested you can bet your last dollar that he will do all in his power to get results with that particular saw. In other words you have him working for you and with you instead of against you. I have seen instances where the filer and sawyer pulled against each other like a couple of Missouri mules. The sawyer "kicked" on every blade sent out to him; the filer intimated with loud accents that the sawyer was a "rube" and didn't know a good saw when he saw it. Co-operation between sawyer and filer will make the work of both lighter and easier, and the boss will be better satisfied and think more of both.

Canada's Imports and Exports of Wood Goods

An advance report of the trade of Canada for the twelve months ending February, 1914, shows that the exports of forest products were valued at \$42,456,502, as compared with \$43,125,791, in the corresponding period a year ago; \$31,339,637 in 1912, and \$35,959,530 in 1911. Imports of wood and manufacturers of wood from the United States were valued at \$24,354,020 and from Great Britain at \$635,168, making a total of \$25,601,277, as compared with \$27,557,307 for the twelve months ending February, 1913.

Exports of wood and manufacturers of wood were valued at \$33,570,483 to the United States and \$12,369,385 to Great Britain, a total of \$49,479,120, as compared with \$49,403,342 during the twelve months ending February, 1913.

Details of the exports of wood and manufacturers of wood are as follows:—

	Twelve months ending February			
	1913	Total	To United Kingdom	To United States
Wood and mfrs. of—Total	49,403,342	49,479,120	12,369,385	33,570,483
Logs	1,076,574	507,649	117,012	390,232
Lumber—Deals, pine	1,461,882	1,412,251	1,325,634	61,850
Deals, spruce and other.	5,584,805	6,646,020	6,047,436	517,836
Laths, palings and pickets.	1,977,649	1,932,030	2,024,060	1,878,375
Planks and boards	20,834,278	19,383,923	1,808,947	15,099,074
Shingles	1,380,316	1,579,362	292	1,542,312
Timber, square	1,306,971	580,998	554,771	12,741
Wood blocks for pulp	6,576,021	7,184,817	.....	7,184,817
Wood pulp	5,428,541	6,203,264	1,229,992	4,674,145

Spanish River Co. Loses Appeal

A report from New York states that the Spanish River Pulp and Paper Mills, Limited, has been unsuccessful in their application before the United States Court of Customs Appeals for free entry of their ground wood pulp lumber under the reciprocity act. The question involved arose over the prohibition of export of Crown lands woods from the company's limits. This prohibition was in force when the company secured its limits, but was subsequently removed. Exports to the United States were, however, charged the full duty

upon entering that country. The Board of General Appraisers sustained the Spanish River Company's claim for free entry, but the Court of Customs Appeals has now reversed the decision, claiming that it would be an evasion of the United States law, which is designed to prevent restriction of every kind upon the export of pulpwood from Canada.

A Long Forestry Survey Trip

One of the longest journeys ever made in the interests of forestry surveys will be undertaken shortly by William J. Boyd, of the Faculty of Forestry, University of Toronto. The Dominion Government has placed him in charge of a party to ascertain the resources of an enormous area of practically unknown land lying partly within the Arctic Circle. Mr. Boyd will make his way northward from Edmonton two thousand miles to the Arctic Sea and will return in about two years by way of the Yukon River.

The Cost of Doing a Retail Business

There are three essential elements in any selling price—invoice cost, expense and profit—and the two latter only are partially within our own control, the invoice cost being altogether above and beyond our control.

It has been truly said, "The wastefulness of commerce is one of its weakest spots," and especially is this applicable to our business, in which there is not only waste through failure to analyze our cost of doing business, but also through multiplication of competition.

Profits may be conserved by waste prevention, efficiency, economy and lessening of competition, the latter being altogether beyond our control.

Cost is an every-day word, yet few of us really discern its true meaning.

Manufacturers usually analyze cost accounting more thoroughly than the dealers—too often we conduct our business on an assumed arbitrary cost and he who leads in our line must ascertain the truth as to the actual cost of conducting his business—the worst deceived man is he who deceives himself.

No business can be more secure in its fundamental permanency and soundness than that which supplies staple building material in a practically undeveloped country.

In our business we deal very largely in a staple commodity, the commercial value of which is generally recognized as fixed with reasonable certainty in all localities and seasons of the year.

What are the chief reasons for so many of us failing to realize any real or substantial results notwithstanding our application, earnestness and diligence?

Perhaps the first and most important reason is that in nearly every community there are too many dealers for the volume of business possible in that community, a fact which materially increases expenses and necessarily causes much economic waste through duplication of effort.

There are at least two other reasons for inadequate results—where they are inadequate—on investments in retail lumber yards, ignorance and inefficiency.

These two work hand in hand with loss and waste, and the successful merchant is he who wisely learns by thoroughly informing himself as to his business, its essentials, its limitations and its possibilities.

A few years ago "Efficiency" was the watchword commercially, and at the present time "Standardization" is offered as a panacea.

Standardization of methods of cost and profit accounting is rapidly becoming of interest to retail merchants, and we should standardize our methods in these important essentials, thus avoiding the realm of guess-work.

To insure a uniform, safe and standard basis for service in our business we could probably do no better than to utilize the rules recommended by the National Association of Credit Men.

As an illustration, let us assume an investment of:

In merchandise	\$10,000
In receivables	5,000
In R. E. and Imp.	5,000

Total \$20,000

1. Charge interest on the first two items (R. E. and Imp. not included) at the beginning of the business year. Interest at 8 per cent. on \$15,000 \$1,200
2. Charge rental on the real estate and improvements used in your business at a rate equal to what you should receive if renting to others, which is at least 10 per cent. of the fair and reasonable sales value. Annual rental of 10 per cent. on \$5,000 500
3. For your own services you should charge an amount equal to what your services would be worth to others; treat in like manner the services of any member of your family,

though such a one may not be on the regular pay-roll.

Salary of manager of yard	1,200
Salary of assistant	600
4. Charge depreciation on all goods carried over on which you may have to make a less price because of changes in style, damage through exposure to weather, culls, broken bundles etc.	150
5. Charge depreciation on wagons, teams, tools and all other fixtures, equipment, etc., subject to depreciation and wear which is usually computed at 10 per cent.—\$1,500 at 10 per cent.	150
6. Charge amounts donated or subscriptions paid, including advertising, publicity expenses, charity, etc.	120
7. Charge all fixed expenses, such as water, lights, insurance, interest, fuel, taxes, attorney fees, etc.	350
8. Charge all incidental expenses, such as drayage, postage, stationery, livery, telegrams, telephones	120
9. Charge all losses, such as goods stolen, rebates to customers, bad debts, etc.	250

Total \$4,640

When you have ascertained what the sum of all the foregoing items amounts to, prove it by your books, and you will have the total expenses for the year, then divide this amount by your total sales, and you will have the per cent. of expenses.

In the above illustration on assumed annual sales of \$25,000 and an assumed expense of \$4,640, the per cent. of expense is 18.56.

A merchant who finds at the end of the year that his profits are inadequate sometimes assumes that an excessive expense account is the sole reason for an inadequate profit, when the trouble is often due more to his low selling price than to his expense account.

The subject of the correct method of calculating profits is an important one, and most essential, and there is a variance of opinion as to the correct method.

An incorrect understanding of the arithmetic of percentages and failure to observe the correct method of figuring the percentage of profit on the selling price instead of the cost has been the cause of many slim showings at inventory periods.

It is scientifically correct to base the margin of gross profit on the cost price, but it is most important to keep prominently in mind in doing so the difference between the cost and selling price.

A Puzzle in Percentage

If an article cost \$1.00 to manufacture and the expense of selling is 22 per cent. For what must it sell to yield a net profit of 10 per cent?

The superficial way of arriving at the answer would be to take the cost of \$1.00 and add 22 per cent., or 22 cents, and to the sum of \$1.22 add 10 per cent. profit, or 12 cents, giving \$1.34 as the selling price, but the answer is \$1.47.

In this case the expense percentage being 22, the expense is 22 per cent. of \$1.47, or 32 cents, instead of 22 cents.

This illustration shows us that if our percentage of expense on selling price, as in the example used of the yard selling \$25,000 per year is 18.56 per cent., then 18.56 per cent. added to the cost of goods will not cover the expense because we have used the selling price as the basis.

In one case we are figuring on the selling price and in the other case on the cost price.

The percentage of profit and the percentage of cost of doing business should both be figured on the same base.

It is a common error to add 25 per cent. to cost when 25 per cent. gross profit is wanted, and imagine that we are getting 25 per cent. gross profit on our sales when we are really getting 20 per cent..

The most important reasons why percentage of profit should be calculated on selling price are:

1. The sales totals are always readily ascertainable.
2. Gross cost generally can only be ascertained at the end of the year.
3. The amount of profit is generally figured on the volume of business or the aggregate sales as is also the percentage of expense.
4. Allowances to customers and salaries to salesmen are based on sales.

As an illustration of the self-deception often practiced in figuring profit entirely on cost, a transaction that recently came to notice may be used as an example.

In this case the yard manager had a gross profit (on cost) of 22.4 per cent.—the bill cost \$500 and was sold for \$612. As their expense account was 15 per cent. of their sales, the expense was \$91.80.

Cost of bill plus expense	\$591.80
Selling price	612.00

Net profit \$ 20.20
or 3.3 per cent. on selling price.

The yard used a printed list at which prices they figured all estimates and made a practice of quoting 10 per cent. discount for cash from estimates so figured.

Safeguarding the Jointer

The National Association of Manufacturers is taking a keen interest in protecting employees from injury, and is now issuing a "safety first" supplement to its publication, American Industries. In a recent issue the following appeared on "Safeguarding the Jointer"—an article that is of more than passing interest to men operating and employed in woodworking factories:

"While the circular saw is credited with causing more injuries than any other woodworking tool, this fact only remains true because of the great number of these machines in use, as the jointer is equally if not more dangerous, and the injuries inflicted, especially with the old type of machine, are usually of a more serious nature. Like the saw, the jointer is a very common and necessary tool in all shops where woodworking operations are done, and even with the most experienced operators, and the best type of safeguards, the work cannot be considered safe. This is true because of the close proximity of the operator's hands to the rapidly revolving knives, also the fact that the safety of the operator rests wholly on the hands for controlling and manipulating the work. As the stock is pushed over the knives, some pressure must be exerted to keep it in place, and to insure satisfactory work, which always brings the hands directly over the gap in the tables and very near the danger point. This requires a careful operator, one whose mind is always centered on his work, and who thoroughly understands the setting and operating of the machine.

"There have been many guards devised to improve the safety of this hazardous machine, but the one that will do more to prevent accidents or decrease their severity is the safety cylinder. With the old square head type the opening between the tables and knives is very much greater than with the circular head and once the fingers are struck by the knives they are pulled further in and the major portion of the hand is usually mangled. The circular head on the contrary fills the opening so that there is no space left for the fingers, and the injury, except in very rare cases, does not result in more than clipping the finger ends. Another feature of the circular head is when the back table is set too low or when short pieces are being run, the knives have a tendency to cause the work to tip and throw the hand into the cutter head.

"The circular head does not complete the guarding of the jointer, as it is also advisable to place a guard, either automatic or adjustable, over the knives, as a further step toward safety. There is a large variety of such guards manufactured, having more or less merit, which can be used on many classes of work, while in some cases even the best of them are impracticable and the circular head is the only guard available. Such a guard has another feature in keeping the portion of the knives covered that is not in use, thereby preventing one unknowingly placing the hand in a position that may cause injury. When the edge of the stock is being jointed there is no need to keep the entire length of the knives exposed, as instances often occur of a workman passing a machine and laying his hand over the knife, or the operator slipping and the fingers being thrown into the knives.

"A frequent cause of jointer accidents is due to the operator attempting to plane a piece that is too short to be held with safety, which results in its tipping or kicking back, throwing the hand into the cutter head. In Germany among woodworking associations it is a rule not to permit pieces shorter than 15¾ inches to be jointed on a hand planer unless special precautions are taken to hold the material.

"While it is difficult to set a minimum length, it is always advisable to use a push block or other holding device, should there be any possibility of an accident resulting because of short material. Where there is a large amount of short work to be done, a self-feeding attachment will aid materially in eliminating accidents from this source. With such arrangements it is only necessary for the operator to push the material to a point where it will be carried to the knives by the means of rollers, spurs or fingers, thereby not requiring him to place his fingers in a dangerous zone.

"One that is familiar with woodworking operations has often noticed the slippery condition of floors around saws, shapers, jointers, and other woodworking machines and can readily understand what the result may be should an operator slip or fall while working in their vicinity. Because of the hazards connected with jointer work such a floor condition should not be permitted to exist and the danger removed by placing a rubber mat, old belting or other non-slipping material on that portion of the floor utilized by the operator."

The 17th annual convention of the National Hardwood Lumber Association will be held at Buffalo on June 18th and 19th.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 7-tf

Shavings and Sawdust

Wanted to buy. Would prefer shavings baled and separate from the sawdust. Quote prices at your station.

M. BRENNEN & SONS, Hamilton, Ont. 7-12

Wanted

30 ft. White Pine and Spruce piles for immediate delivery or during the summer at the rate of one or two cars per week. Box 20, Canada Lumberman, Toronto. 10

Wanted

Soft Elm, 4/4 log run.
Birch, 5/4 log run.
Quote lowest prices F.O.B. mill for dry or new cut.

E. M. NICHOLSON, Board of Trade Building, Montreal, Que. 9-tf

Wanted To Buy—1000 Birch Logs

fresh, clean, straight and sound, 14-in. and up diameter at small end, 8-ft. to 16 ft. long. Delivery to commence as soon as possible. Terms: 75 per cent. cash when alongside track at railway station, balance when loaded on cars. Write P. O. Box No. 1595, Montreal, stating best price. t.f.

Wanted to Buy

250,000 ft. 4/4 No. 1 C. & B. Basswood, winter sawed.
Ten cars 4/4 x 12-in. and up Soft Elm.
One car 4/4, 6/4 and 8/4 1s and 2s Soft Elm.
Box 998, Canada Lumberman, Toronto. 7-10

For Sale-Lumber

Red Pine For Sale

Four carloads 2 x 4 and up; 18 ft. to 24 ft. P. O. Box 392, Ottawa, Ont. 3-tf

Hard Maple and Hemlock

We have half a million feet hard maple and half a million hemlock. Can cut dimension stock. Write best offer.

Trenton Cooperage Mills Limited, Trenton, Ont. 7-10

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

For Sale

Quantity of first-class cheese box veneer.
G. R. JONES, Eldorado, Ont. 10-12

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.
GEO. C. GOODFELLOW, Montreal, Que. c

For Sale

2 cars 3 x 4 to 7-in. Sound Maple Hearts.
2 cars 4 1/4 x 5 1/2 Sound Boxed Maple Hearts.
1 car 2 1/2 in. Soft Elm, No. 1 C. & B.
1 car 2-in. Birch, No. 2 C. & B.
4 cars 1 1/2-in. Beech, No. 2 C. & B.
5 cars 1 1/4 in. Maple, No. 2 C. & B.
Dry stock. Immediate shipment.
Pedwell Hardwood Lumber Co., 6 St. Ann's Road, Toronto, Ont. 9-tf

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE, Timber Department, Janesville, Wisconsin. 1-tf

For Sale-Machinery

For Sale

Twenty-three ton Manhattan Yard Locomotive, ten cars and rails. Apply to
E. R. C. CLARKSON & SONS, 15 Wellington Street West, Toronto, Ont. 10

WOODWORKING MACHINERY FOR SALE: 1 MacGregor-Gourlay power feed tip saw; 1 No. 51 Crescent universal woodworker; 5 30-in. Ideal pedestal bandsaws; 1 24-in. Ideal planer, matcher and moulder; 1 No. 1 Ballantine power feed dowel machine; 1 8-in. three side moulder; 2 6 1/2-ft. iron frame swing saws. H. W. Petrie, Limited, Toronto. 10

Second Hand Machinery

150 to 175 h.p. Corliss Engine, 16-in. x 36-in., new two years ago.
75 to 100 h.p. Brown Automatic, 13-in. x 30-in., in excellent condition.
500 to 750 h.p. Buckeye; a good sawmill engine.
Boilers, 72-in. x 18-ft. and 54-in. x 14-ft.

THOMAS HOBBS, Mail Building, Toronto, Ont. 7-tf

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Position wanted as sawyer. Circular, single or double cut band saw. Box 306, Parry Sound, Ont. 8-10

Single cut band or circular sawyer open for engagement. Best references. W. Gariefny, Box 49, Chandler, Gaspé Co., Que. 9-10

Position wanted by experienced manager in good lumber or lumber manufacturing concern in Canada. Thoroughly up-to-date in wholesale or retail end. Robert Wells, Winchester, Ont. 10

COST CLERK desires position with a woodworking concern. Ability to organize. Good references. Can give satisfaction. Box 300, Canada Lumberman, Toronto. 9-10

Saw filer, band or circular, wants position. 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 9-12

Young man desires position. Eight years' experience in Montreal retail lumber business. Speaks both languages. Can take charge of retail yard, or will travel in any part of the Dominion on salary or commission. Box 24, Canada Lumberman, Toronto. 10

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

WANTED—Lumber Traveller for Ontario. Would prefer young man with experience. Reply confidential. Box 5, Canada Lumberman, Toronto. 8-11

Wanted at once for saw mill: One filer for circular saws, two setters, two doggers, two edger men, one trimmer, twenty-five general hands.

Devon Lumber Company, Limited, Pine, Ont. 10

WANTED—Salesman calling on the lumber trade and contractors in the Eastern Provinces, to handle Dr. J. M. Stewart's Veterinary Remedies as side line.

Palmer Medical Company, Ltd., Windsor, Ont. 10-tf

Business Chances

Wanted

A thoroughly practical man with some capital to invest, capable of taking entire charge of sawmill and logging operations with a well established and successful firm owning limits containing 12 years' cut. Have a cut of three million this year. An exceptional opportunity for the right man. Owners wish to retire from active part of this end of the business. Write Box 18, Canada Lumberman and Woodworker, Toronto, Ont. 10-11

Business Opportunity

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Write J. A. C., Canada Lumberman, Toronto. 10-12

British Columbia Saw Mill and Timber Limit For Sale

A 25-thousand feet capacity Saw Mill, and 90 million feet first class Spruce, Red Cedar, Hemlock and Yellow Cedar, etc., under B.C. Special License. At good shipping point near Prince Rupert, B.C. Inspection invited. A. Cuthbert, P. O. Box 456, Prince Rupert, B.C. 6-11

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. 10

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 766, Canada Lumberman, Toronto, Ont. 8-tf

For Sale

Complete sawmill outfit, practically new; capacity 12 M. ft. hardwood. Marine boiler, 50 h.p., and Dutch oven. 40 h.p. engine. No. 4 carriage with overset lever. Cable feed. Friction canter. Double edger; cut off saw and a full complement of large and small saws and belting, including a 14-inch 2-ply leather driving belt. Frame building, iron roof.
Also Long Mfg. Co. Clipper Shingle Machine in best of condition, and outfit complete; will be sold with sawmill or separate. Mill at Angus, Ontario. Apply Frank McMullin, Barrie, Ont., who will show mill, or Chas. T. DePuy, Rochester, N.Y. 8-10



Timber Sale

Tenders will be received by the undersigned up to noon of the 8th day of July, 1914, for the right to cut the Red and White Pine timber on Berths 1 B, 1 C, and 1 D, in the Mississauga Forest Reserve tributary to the north shore of Lake Huron, each Berth containing an area of 36 square miles, more or less.

For maps and conditions of sale apply to the undersigned or the Crown Timber Agents at Thessalon, Sault Ste. Marie, Webbwood and Sudbury.

W. H. HEARST,

Minister of Lands, Forests and Mines. Toronto, April 18th, 1914.

N.B.—No unauthorized publication of this notice will be paid for. 9-18



Tenders for Wood Limit

Tenders will be received by the undersigned up to and including Monday, the 8th day of June, 1914, for the right to cut wood of various descriptions on a certain area tributary to the Frederickhouse and Abitibi Rivers in the District of Temiskaming.

Tenderers shall state the amount they are prepared to pay as bonus in addition to the ordinary Crown dues, including 40c per cord for spruce and 20c per cord for other pulpwoods, or such other rates as may from time to time be fixed by the Lieutenant-Governor in Council for the right to operate wood products mills on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory, and to manufacture the wood into products thereof in the Province of Ontario.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario for ten per cent. of the amount of their tender, to be forfeited in the event of their not entering into an agreement to carry out the conditions, etc.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

W. H. HEARST, Minister of Lands, Forests and Mines. Toronto, Ont., April 24th, 1914. 10-11

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

**Timber Sale**

Tenders will be received by the undersigned up to noon of the 15th day of July, 1914, for the right to cut the Red and White Pine timber on berths 1, 2 and 3, Township of Blyth, in the District of Nipissing.

For maps and conditions of sale apply to the undersigned, or the Crown Timber Agents at Sudbury and North Bay.

W. H. HEARST,

Minister of Lands, Forests and Mines. Toronto, May 4th, 1914.

N.B. No unauthorized publication of this notice will be paid for. 10-13

**Sale of Pine Timber on Metagami Indian Reserve**

Tenders will be received by the undersigned up to and including the 6th day of July next for the right to cut the Red, White and Jack Pine timber over eight inches in diameter on the Metagami Indian Reserve, situate on the Metagami River in the District of Sudbury. For particulars, descriptions, conditions, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines. Department of Lands, Forests and Mines, Toronto, May 2nd, 1914.

No unauthorized publication of this notice will be paid for.

**Tenders for Allan Water River Wood Limit**

Tenders will be received by the undersigned up to and including Wednesday, the 15th of July next for the right to cut ties from Spruce, Balsam, Banksian or Jack Pine, Poplar and Whitewood trees seven inches and upwards in diameter two feet from the ground sufficient to supply a tie preserving plant for a period of twenty-one years from unoccupied, unsold and unlocated lands of the Crown tributary to what is known as the Allan Water River, tributary to the Grand Trunk Pacific Railway in the District of Thunder Bay.

Tenderers shall state the amount they are prepared to pay as bonus in addition to the Crown dues of \$2 per thousand feet board measure for anything not manufactured into ties, and for ties at the rate of 5c each, or such other rates as may from time to time be fixed by the Lieutenant-Governor in Council.

Such tenderers shall be required to erect within the limits of the territory covered by the right to cut ties, or at some other place approved by the Lieutenant-Governor in Council a tie preserving plant.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario for \$25,000, to remain on deposit as security for the carrying out of the conditions of their tender.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines. Toronto, Ont., April 27th, 1914. 10-13

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

For Sale

Modern, up-to-date Band Sawmill, new Waterous machinery, capacity 65,000 ft. per day. Apply to

E. R. C. CLARKSON & SONS,

15 Wellington Street West, Toronto, Ont.

**Saw Mill Machinery For Sale**

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood. The Waterous Engine Works Company, 22-t.f. Brantford, Canada.

Yellow Pine Grading

A proposed change in the methods of grading yellow pine was brought up in a favorable report recently presented by the committee on grades at a meeting of the Yellow Pine Manufacturers' Association in Chicago. While not a new principle, the method proposed, which is to judge the grade of the timber by the number of annual rings to the inch, is of great importance to the lumbering industry and also to the consumer of lumber.

The ring rule is not a new thing as applied to pine timbers. Its principle is well understood. It is based on the number of rings of yearly growth per inch on a line measured from the tree's heart to the bark.

There are four leading southern yellow pines, commonly called longleaf, shortleaf, loblolly, and Cuban. The first of these is usually of slow growth, with narrow rings. It is known commercially as hard or Georgia pine, and possesses great strength when the timber is of slow growth. The other three pines usually grow more rapidly, with wider rings; but any of the pines may grow slowly or rapidly.

The proposed ring rule does not favor or disparage any particular species of southern yellow pine, but is concerned only with the width of the growth rings. This is on the assumption that timbers with rings of the same kind are of the same strength without regard to the exact species. In connection with the number of rings to the inch, their character is likewise considered, with regard to the proportion of the ring composed of dense summerwood and of light springwood. The proposed rule has been

favoured because of its simplicity, and especially because it would remove a fruitful source of disputes and misunderstandings.

The Forest Products Laboratory at Madison, Wis., paved the way for the adoption of such a rule by making numerous tests of pine beams to ascertain their strength in relation to the width of the rings and the comparative quantities of springwood and summerwood. The tendency of the tests all pointed one way, and showed that so far as the southern yellow pines are concerned, strength is not a matter of species but of structure; and that two trees with similar rings do not differ much in strength.

"On a ring rule system of grading, timbers would be classed as 'dense wood' and 'not dense wood.' A somewhat explicit definition of what dense wood is would necessarily form an important paragraph in the grading rules. The definition which the committee had before it at the meeting on May 5 was as follows:

Dense wood shows on cross section an average of not less than eight growth rings per inch, measured over the third, fourth and fifth inches, on a radial line from pith to circumference, containing in the greater number of rings one-quarter or more of summerwood; or it may have an average of six or seven rings as above,

provided that, in the greater number of rings, one-third or more of the ring is summerwood; or wider ring material if in the greater number of rings, one-half or more of the ring is summerwood as above; and the ring must show a sharp contrast in color between springwood and summerwood.

TIMBER CRUISES

Timber Estimates, Forest Surveys and Maps.

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Review of Current Trade Conditions

Ontario

There is still nothing new of importance to report in connection with trade conditions in Ontario. With the arrival of warmer weather there has been some expansion in the volume of trade, but, generally speaking, wholesalers and retailers report that trade is exceptionally quiet. This seems to apply fairly generally throughout the country districts. In the large cities, building operations are a little more active, but are still much less than normal. In Toronto, some apprehension is felt on account of the threatened strike of the bricklayers, which would hold back building operations and postpone lumber purchases to a considerable extent. Travellers who have been covering Ontario points recently, continue to report extensive imports of yellow pine and American hemlock.

The demand for lath is good and stocks are very scarce with the result that prices continue stiff. No change is reported in the shingle situation and the demand is quiet.

Various reports have been received from Northern Ontario in regard to the results of this year's log drives. On the whole the reports show that the situation has improved during the past fortnight. A good deal of anxiety was felt recently on account of the low water prevailing at most low water points, which threatened to hang up many of the drives. During the past fortnight the weather has been more favorable. There has been a fair amount of rain, widely distributed and many of the doubtful drives have made good progress. The situation however, is not yet as reassuring as many operators would like. There is still a possibility that drives in some quarters which have a long distance to travel, or which commence in small creeks and shallow waters will meet with considerable difficulty.

The Ottawa River has been entirely cleared of ice by the recent warm weather. All the mills were operating by the first week in May. Trade is now fairly active and is expected to improve, although money is tight and building operations are curtailed to some extent. The export business to the Old Country is still very quiet on account largely of the important political problems which are disturbing trade.

Eastern Canada

Steady business continues at Montreal, but there is no rush of orders. Prices show no changes, but it is expected that an upward tendency will develop in the near future. Building permits for the first four months of the year show a falling off, but there were indications of a number of large buildings soon making a change in this condition. Log driving conditions in the St. Maurice River districts have been unfavorable on account of the absence of rain. Trade with Great Britain is practically at a standstill, although a fair quantity of birch timber has gone forward. Stocks of pine in Great Britain are heavy. The ground wood market shows no change. Low water conditions in Canada and the United States are expected to advance the prices for ground wood.

Conditions in the lumber trade in New Brunswick have shown some improvement during the past fortnight. The demand for lumber, however, is much below what it should be at this season. The spring weather has been exceptionally backward and a result is that building operations were delayed considerably. This has now been altered, a fair quantity of building is in progress, causing an improved demand for factory stock.

All the saw mills at St. John had started operations by the middle of the first week in May, with the exception of two which were waiting for logs. The mills sawing for the English market have sold their season's output at good prices. Those which are sawing for the American market have not been so successful, as it is hard to find buyers at any price. Practically all deals for the English market were sold at about \$17 per thousand for specifications of 50 per cent. 7-in. and 8-in. x 3-in. and 50 per cent. 9-in. and up, while scantlings and 4th quality brought \$2 per thousand less. These prices are all on sellers' wharves at St. John.

Merchantable spruce boards continue firm at \$16, but stocks offering are light. Narrow scantlings are in only moderate demand in the American market. City sawn, 2 x 3-in. and 2 x 4-in. are bringing about \$15 to \$15.50. Bank logs are commencing to come forward and are selling at about \$14 per thousand for deal logs and \$9.50 to \$10 per thousand for battens. Driving conditions have been unfavorable up to date and practically no driving had been done up to the first week in May. The drive on the upper St. John only commenced about May 4th and then encountered cold weather and lack of rain. Laths are

selling about \$3 on the wharf at St. John and stocks are very low. Only a fair trade is reported in box shooks.

The demand for dimension spruce at Boston does not show much improvement and it is thought that when more of the mills are marketing their output, prices may be more difficult to maintain than at present. Recent reports also tell of difficulty in making collections. The general base price for frames continues at \$25, and where there is no doubt about delivery, sales are made at \$24.50. Random is firmer than usual, some merchants asking \$23 for 2/4-in. There is a good demand for 2/8-in. at \$23. Spruce covering boards are less active, sales having been made recently at \$21.50. The usual price, however, is about 50c or \$1 more. No. 2 matched spruce boards are steady at \$24.50 to \$25. At New York the market for eastern spruce shows no important change. Prices of hemlock boards at Boston are a little firmer, good eastern clipped boards selling at \$24 more easily than they did a fortnight ago. The lath market at Boston is perhaps a little easier than it was a fortnight ago and \$4.20 for 1 5/8-in. and \$3.85 for 1 1/2-in. are probably representative quotations. Shingle prices are weak and the demand shows no improvement. White cedar extras of excellent quality are offering as low as \$3.50 and \$3.60 with collections at \$3 to \$3.20 and second clears at \$2.75 to \$2.90. Red cedar extras are bringing \$3.38 to \$3.75, according to quality.

Great Britain

Quiet business continues at London, but latest reports state that indications of improvement are noticeable. Shippers are holding out rather firmly with the expectation that the demand will improve in the near future. Prices at London show very little change. At Foy Morgan and Company's recent auction sale 3rd Quebec spruce, 3 x 11-in. was sold at £11 5s., 2nd Quebec spruce, 3 x 9-in. brought £12, and 2nd Montreal spruce brought £11 15s. For 3rd Montreal spruce £11 5s. was paid. Some of the other prices were as follows:—3rd Quebec 14 ft., at £11 5s., 4th Quebec at £10 10s., 5th Quebec at £9 10s., 3 x 7-in. 2nd Quebec at £10 5s. and 3rds at £9 10s.

No change is reported in the spruce deal c.i.f. market at Liverpool. A fair amount of business is in progress and shippers of the better class of deals are showing no inclination to part with their stocks unless good prices are secured. There is a feeling that better values will be obtainable when the market is a little more settled.

The Timber Trades Journal in its issue of April 25th says:—"It will take some time for the spot market to fall into line when the cargoes come along, and we feel confident that shippers and importers realize this. For instance, take the Liverpool ex quay market price for liner parcels to-day. These are very much below what importers can sell their cargoes at even to get cost price. Spruce has been sold for this port for later shipment, and we are given to understand that importers have paid shillings more per standard c.i.f. than they are selling to-day ex quay, so that in the ordinary course of events prices "to arrive" will more than probably be 20s. per standard over present quotations. Of course, it must be remembered that the quality and specifications of the cargo deals for Liverpool will be superior to those now being offered; but the fact remains that importers do not consider that they have paid more than the value, and it is for consumers to realize this and make the most of their opportunities at present.

"Manchester has not been affected to anything like the extent that Liverpool has with these consignment parcels, so that it is possible to offer Liverpool deals to arrive at somewhere about current quotations for Halifax deals now on the quay; but at the same time it would be as well for consumers to note that Miramichi, or equal, will be more than the usual difference, and we shall not be at all surprised if this is more marked as the season progresses. The actual spot business for the time being is not too encouraging, but the prospects are better, and it is expected that a sudden revival will take place shortly, as consumers generally are working off their high-priced stocks before making new purchases."

United States

The lumber trade in the United States is doing fairly well, if one compares it with other branches of trade, but that is about the most that can be said for it. With the advance of the season, the demand is increasing gradually and an apparent gain is noticeable throughout the country. The spring building campaign is widening, and as stocks generally were low in retail yards, it has been necessary for retailers to make sufficient purchases to meet the current demand for consumption. Similar conditions prevail in the furniture and other large consuming industries.

The principal difficulty in the lumber market to-day is caused by

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

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the absence of large orders from railroads, carshops and extensive consuming industries. Large business interests are governed so much by the uncertainty in the general business situation that they are still trimming their sails closely. The country is still waiting anxiously for the decision of the Interstate Commerce Commission in regard to freight rate advances, as it is felt that with this question settled either one way or the other, the policy of the railroads in regard to purchases of stock will be definitely determined.

Gradual improvement is reported in the northern pine trade. Factories and other large consumers are showing an increased demand and, the building activity in the smaller towns is helping the retail trade. Good lumber is more plentiful than last year, but prices are firmly held. Stocks of low grade lumber are light. The hemlock situation shows improvement. Wisconsin prices have continued firm for the past two months. The demand in the Saginaw Valley shows

improvement and prices are about \$2 less than a year ago. It is reported that there will be a large production of hemlock bark in the upper Michigan Peninsula. Improvement is reported in connection with eastern spruce, the demand being heavier and prices firmer. West Virginia manufacturers are expecting better prices for spruce as the season advances.

The hardwood trade continues unaltered. Exceptionally heavy rain falls during the past fortnight delayed work in the woods in many districts throughout the south, with the result that a curtailment of the output is likely. Among the southern hardwoods quartered oak continues in good demand. Plain oak is steady and poplar is quiet. There is a good trade in ash, an improvement is reported in black walnut. Stocks of northern hardwoods are light and the market is firm. The demand for maple flooring is good and prices are stiff. There is a fair demand for birch, maple, elm and basswood.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

Improvement in St. John Trade

St. John, N.B., May 5th (Special to the Canada Lumberman): Locally, conditions have changed for the better during the past month, but the demand for lumber is far from what it should be at this time of year, one of the reasons of course, being that the spring is very slow in warming up and the frost is really not yet out of the ground in some places.

A fair amount of house building is promised for the coming season throughout the city and in some cases the foundations are now being put down. This has started a certain demand for factory stock, for which the demand has been very small during the entire winter. Prices for all house joiners supplies are not quite so high as was anticipated, as the amount of work being limited, the manufacturers and factory men are cutting prices to some extent in order to capture the work. Schedules are being sawn out at about the same prices as last year.

All the sawmills are now running with the exception of Sayre & Company and Hilyard Bros., who may start later when logs come to hand. Messrs. Stetson Cutler & Company are sawing for the American market, the balance of the mills are sawing English deals. The mills sawing for the English market may have somewhat the best of it this season, as they have all sold their season's output at good prices, while the mills sawing for the American market have not been able to dispose of their cuts at any prices which would leave a profit. In fact, it is very hard to find buyers at any price. No change in the price of English deals will be felt by the manufacturers here as they are really out of the market, about all deals were sold at about \$17.00 per M. for 50 per cent. 7 and 8-in. x 3-in., 50 per cent. 9-in. and up, with the scantlings and fourth quality \$2.00 per M. less. All on sellers' wharves here.

J. E. Moore & Company now have a steamer loading for the English market and Geo. McKean also has another, which is taking largely stock from the interior mills, which has been cut during the past winter. This stock should have been shipped by the last liners, but the spring being so backward, and the rivers not opening, compelled the buyers to make special charters for this stock.

Prices for merchantable spruce boards remain firm at \$16, but very few are being offered, having been purchased earlier for the season's cut of mills. Narrow scantlings are not bringing quite so good a price as last season, owing to the shortage in local building, low prices and poor demand in the American market. For city sawn 2 x 3-in., 2 x 4-in. about \$15 to \$15.50 can be had. 2 x 6-in. bringing about same prices. Rotary sawn, country stock of sawn sizes can be purchased on cars for about \$14 per M.

Bank logs are now beginning to come forward and are bringing about \$14 per M. for deal logs, with battens at from \$9.50 to \$10 per M. Practically no driving has been done as yet. Many of the lakes are still solid and very little rain has fallen as yet. On the upper St. John they have just begun to drive, but are not getting on very fast owing to cold weather and no rain. Very few logs have yet come into springhill and prices have not yet been made for these logs, but as a rule, they sell for about \$1.00 per M. higher than in St. John.

Messrs. Riddle Robbins Lumber Company which built a mill last year at Hatfields Point on the Belisle will not operate this year on account of some litigation now pending between the partners or stock holders of the concern. It is to be hoped that everything will be adjusted so that the mill will be operated again in the near future.

H. W. Woods, it is said, will not operate his mill on the Nerepis.

The Wilson Box Company have rebuilt their mill at Westfield, and now have a very up-to-date plant.

The mill at upper Pagetown, operated lately by the Warren Company, will not be run during this season owing to the death of the owner. The mill is now being offered for sale by L. G. Crosley of St. John, who has been a part owner in the past.

At Fredericton, the mills of the York and Sunbury Milling Company and W. D. Gunter are now in operation with logs enough to carry them through the season.

Four cargoes of hard pine have arrived here during the past week from the south, consigned to J. A. Likely. They are now being unloaded and stored in his yards at St. John east. Freight from the south are about \$2.00 per M. less than last year. Where \$9.50 was the going rate last year, only \$7.50 to \$7.75 can be had this season.

Thos. Bell & Company are supplying the hard pine for the new docks at West St. John, the price is said to be about \$24.50 delivered St. John.

Laths are bringing about \$3.00 on wharf, at St. John with stock very low, and very few will be ready for some time to come, no old laths are now on hand.

The trade in box shooks is only fair, as fish are scarce, and it is not expected that trade will improve until later in the season. The demand for onion crate shooks from Bermuda has been very brisk some 100 M. shooks having been shipped from here during the past six weeks, but that trade has now been supplied for the year, and much depends on the crop next season, whether the demand will be as good. Another feature is that the Texan's are now raising onions which are taking the place of Bermuda's and are making their shooks right in their own neighborhood, this will no doubt be felt here by next season.

Coastwise freights are very low to New York, vessels finding it very hard to secure cargoes, taking charters if possible to find them at \$2.75 to \$3.00 per M. No freights for South American can be found, as the lumber trade is practically demoralized in that quarter, and no hopes are held for any market this year.

Ottawa Mills in Full Swing

Ottawa, May 7 (Special to the Canada Lumberman): The recent spell of warm weather has cleared the rivers throughout the Ottawa district of ice, and operations in the sawmills are now being carried on in full swing. Trade is fair, with prospects of improvement. Money is still tight, and consequently, building operations are being curtailed to some extent. Navigation is now open all through the country and a movement in the export trade is looked for. Business is not good in England just now, due principally, it is said, to the uncertainty of the outcome of the several problems of general interest now before the British Parliament.

The McAuliffe Davis Lumber Company, who recently built a large new sawmill and factory on Chamberlain Avenue, to replace the building destroyed by fire last fall are now operating the new plant with 50 hands working full time. The Duke Street mill is now being enlarged to double its present size, at a cost of about \$25,000. When the addition is completed the mill will measure 100 x 200 feet. The machinery for the mill will be installed some time this month. A large new rig saw, made by the Berlin Machine Works, Limited, of Hamilton, Ont., one of the largest rig saws in the country, was laid down a few days ago.

Considerable interest has been aroused in lumber circles since Senator Edwards, head of the firm of W. C. Edwards Lumber Company, Georgian Bay Canal. His objection was made, he said, on the ground

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that its construction would be beneficial to lumbermen and paper manufacturers only. In future the chief industry on the Ottawa River would be pulp and paper manufacturing, he maintained, and raw material could be handled better by large boats than by boom hauling. The canal would cost \$150,000,000 to build, an expenditure which could not be justified, unless the whole public should benefit.

Senator Edwards' application for authority to sell some of the surplus power he is developing at his plant on the Little Chaudiere Falls was passed by the Private Bills Committee last week, after the bill had been amended to compel the power to be sold subject to rates fixed by the Hydro-Electric Commission of Ontario.

Montreal Market Quiet but Steady

Montreal, May 8th (Special to the Canada Lumberman): The market continues in a fairly satisfactory condition. There is no rush of orders, business being steady. Prices are about the same, and the tendency should be in an upward direction. The official returns of the building permits for the first four months of the year were not encouraging, showing a total of \$4,061,166, as against \$5,190,213 in the corresponding period in 1913. The valuation for April was \$2,205,970 compared with \$3,322,406 in April of last year. Since the figures were issued, the decrease up to the end of last month has been more than made up, by permits for some very large buildings. The early falling off in values was due mainly to the increase in residences and flats and to the comparative activity of office building projects.

Reports from the St. Maurice River districts state that log-driving conditions are unfavorable owing to the absence of rain and the consequent lowness of the stream.

Export business to Great Britain is almost at a standstill, and it is pretty certain that the season's shipments will not come up to those of 1913. Messrs. Watson and Todd, the largest exporters from the port, have not shipped a stick, while one or two of the other firms interested in pine have sent only a few carloads. A fair quantity of birch timber has gone, together with a small quantity of sawn birch. There is a large stock of pine on the other side, while the demand for birch is by no means brisk.

Several tenders for the estate of the late Mr. J. H. Redfern were received by the Montreal Trust, the executors, but owing to the low prices offered, it has been decided not to accept any of the bids.

There is little variation in the ground wood market. As far as can be seen, the water conditions both in the United States and in Canada will be very poor, with a consequent diminution in the production of the pulp. This is favorable to a rise in values, especially as the United States will in a short time be compelled to come to the Canadian market.

Sulphite is in good demand, but prices have not materially changed.

The newsprint situation is strong, owing to the extra demands on account of the Mexican trouble. The Laurentide Company have sold the balance of this year's production.

Norwegian Wood Pulp Depressed

The Dominion Trade & Commerce reports in a recent issue contained the following reference to the Norwegian wood pulp market, from a Norwegian trade paper dated March 14th: "In spite of the fact that the statistical position of mechanical wood pulp is a good one, in so far that the Norwegian and Swedish makers have already disposed of the greater part of the calculated production of the current year, the market remains in a depressed condition and quotations are more or less nominal. About 4,000 tons mechanical have lately been sold to France at prices which leave not quite \$8.80 f.o.b., agency commission included. This week inquiries have been made for sulphite cellulose from different countries, including France and United Kingdom. While the European papermakers are generally making so low bids that the sellers are unable to accept the same, America has again bought at prices which the producers consider under present conditions satisfactory. 'Kraft' sulphate continues firm."

The same paper in its March 28th edition says:—"Mechanical wood pulp remains neglected, and the value is declining; at least one sale has been reported at \$8.33 including agency commission. Sulphite cellulose is depressed, although some moderate quantities have been sold this and last week to the States at current prices. Sulphate cellulose is firm but quiet."

Another Norwegian trade paper writes in a recent number as follows:—"With reference to the Scandinavian wood pulp market, it was believed that the very cold period during last winter would create a shortage of water, which would have influence on the prices to make them firmer. The exporters, however, are not convinced of this. There has not, on account of the stocks in the import harbours abroad, been an opportunity to strengthen the prices for the year. On the contrary it seems that the buyers have become still more careful, since they have found out that several new mills are building both in Nor-

way and Sweden. Easy bleaching sulphate, f.i. of the best known marks has been sold at £9 for delivery in 1915. Certainly the stocks in the export harbours are small, and when the shipments commence, the several new mills, which will be ready in 1914 and the following year, no doubt will create a strong competition."

Canadian Stocks in the Old Country

"The majority of the Canadian shippers who make an annual visit each winter to this country have now returned home," says the Timber Trades Journal, London, England, "and though perhaps they have not had reason to congratulate themselves on the net result of their endeavours, they have the satisfaction of knowing that things might have been much worse. Owing to various causes, prices have not been so satisfactory, but manufacturers have made a good clearance of their stocks. The upper qualities of pine deals have been disposed of very well (at reduced prices, however, on last year's figures), and stocks in the Ottawa district being light, buyers on this side should be able to do well with their purchases."

"No doubt it would surprise the man in the street to hear that Ulster's troubles are having their effect on Canadian spruce, but the fact remains, nevertheless, that Belfast merchants, who are large buyers of this material, are fighting shy of purchasing except from hand to mouth, and until the political position is more settled in that quarter, the spruce market will not find relief there. Allowing for the difference in freights, the results to shippers should be equal to those of last year's trading. Unfortunately there seems to be generally a lack of confidence in the trade, and the sooner this pessimism is overcome the better for every body."

"Sales of timber have been fairly heavy, but again on a lower level than that obtained last year. Waney pine is now at a price that it can favourably compete with teak for ships' decks. Although shipbuilders have been busy for some time, the present deplorable condition of the freight market is not conducive to active construction of cargo carriers, and too much must not be expected from these consumers—at least for the present. Hardwoods have kept their prices fairly well, and there appears to be a pronounced scarcity of birch timber."

A Story of What a Small Investment Did

A lumberman had invested \$55,000 all told in a new mill and its equipment. He had secured a very good superintendent and the production had mounted steadily until they were averaging an output of about 75 M. feet per day, says Berlin Quality. Above that figure production did not go however, but the lumberman thought nothing of that, for he considered that he was getting all that he could reasonably expect of his equipment. The Superintendent was a different sort, for he understood that changes in machine set-ups take time, and that orders must be gotten out, no matter how small they were, in a reasonable time. But, he argued, isn't it possible to cut down this non-productive time? Can't we have things arranged so that when we finish one order we can be all but ready to begin the next one? It sounded good but when he tried it, he found that the decreased non-productive time didn't amount to anything, compared to what he lost in the bad will of his men, because they thought he was driving them, and in the poor set-ups they made because of undue haste.

Set-ups were made as fast as changes of the heads and the changes of bits in some of the heads would allow, and many times the haste cost him good lumber.

This put him on another track, and he began figuring out a list of heads that would give him enough to allow of simply removing the heads required for one job and adjusting those for the next. This he figured would save him at least a quarter of the time then required for changes.

He figured that at an expense of about \$350 or \$400 for heads he could increase his output about 25 per cent., and he took the matter to the lumberman for his approval. After some argument the lumberman agreed to send for the extra heads; but for three long months nothing new in heads appeared in the mill.

Then the Superintendent, who had a fixed habit of increasing production at every chance, went to the office. There was some talk, not all of it in whispers, and when the Superintendent went back to the mill, the heads were ordered.

The outcome, to make a long story short, was an increase of fully 33 1-3 per cent. in output the first thirty days after the arrival of all of the heads, and the quality went up markedly.

And the best part of this story is that it is absolutely true.

Hickory is the strongest Canadian wood. When properly seasoned a hickory column will support a weight of 12 tons per square inch cross-section, which is considerably more than what could be borne by a pillar of cast iron or steel of the same length and weight.

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View 1.



View 2.

A New Swage The Best Yet United States Patent for Sale

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View 1 illustrates a swage sawn in half to show its method of working. The tooth is swaged by a series of three rollers which cannot bind. The tooth is rolled out and not drawn.

A double thread is used on the locking lever. The first thread is rapid so that a slight movement of the lever allows the swage to travel on the saw without being lifted over each tooth. The second thread is slow so that the swage may be securely locked on the saw. The point at which the rapid thread ceases and the slow thread operates is governed by an automatic spring.

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Fancy Woods and Veneers

THEIR ORIGIN, VALUE AND
USE—COMMENT AND VIEWS
ON AN IMPORTANT BRANCH
OF THE TRADE.

Utilizing Veneer Waste

The best place to utilize all the waste possible incident to veneer making and veneer using is right in the veneer industry itself, by using the product up more completely. Moreover, there is hardly another place where that old proverb of the ounce of prevention being better than a pound of cure will apply more fittingly than in the veneer industry. In other words, the best way to save or utilize veneer waste and realize from it is to make less of it. Reduce it at the source, get more out of the timber in the way of veneer originally and then handle it so as to get more of the veneer product into real service and have less of it going to trimming. This is easier said than done, but it is not impossible to do to quite an extent at least. It is really easier and much more practical to take the steps and precautions necessary for reducing the quantity of waste than it is to devise other ways and means for utilizing waste after it is made, and converting it to some good purpose.

Both figures and ideas vary considerably as to the amount of veneer waste, or rather the entire quantity of waste between the log and the available, veneer product, and between the available veneer product and the finished veneer article. Perhaps the general average will be something like 33 1/3 per cent. of waste in this available veneer product when it comes to working it up and utilizing it for face veneer or in the making of built-up lumber.

This is merely suggested as a possible tentative average to get at some basis for a line of argument and deduction on the subject of saving waste by preventing it.

One set of tabulated figures in the hands of the writer at present, taken from a rotary veneer cutting plant in operation, shows logs used during a day's run to the total of 45,000 feet, and an available veneer product of 30,000 feet. This would be a waste of one-third as compared to the original log scale, but if figured in comparison with the final veneer product, the waste pile is equal to half the amount of available veneer.

The waste in this instance is figured on the basis of board measure feet in logs as a starting point. Then the thickness of veneer is multiplied to get the inch thickness of boards. For example, 1/4 of an inch thick requires four times the quantity surface measure to make 1,000 feet board measure.

This waste becomes even more startling when it is considered that the board measure scale is calculated to allow something like 25 per cent. of waste—that is, it allows for the sawdust and slabs, which originally amounted to approximately 25 per cent. Compared to the solid contents of a log, there would be in this case a waste of the original 25 per cent. allowance in the log scale and of 33 1/3 per cent. that shows between the board measure log scale and the available veneer product. Adding to this a final waste in the using of veneer of 33 1/3 per cent., the waste item begins to assume almost staggering proportions.

The thing to do is to face this waste in its full measure and then before seeking ways and means to market it advantageously, see how much of it can be prevented by proper manipulation.

The first question of a proposition of this kind is, what makes the waste, how does it come in? The veneer machine presumably makes no kerf, that is, no sawdust; consequently it should turn out a measure practically equal to the full solid contents of the block. It is easy, however, to see that it doesn't. Figures of different mills at different times may vary materially in the totals and the percentage of waste, but all of them, all the time, show that there is a waste, that notwithstanding the allowance for sawdust in log scale measurements, the veneer product will never measure up to the board measure scale of the logs.

The investigation as to what causes this loss shows at least four different channels. The first and most noticeable one is the cores left in the veneer machine. The second on the list is end waste, the extra length of block allowed in cutting to length for trimming the veneer sheets to uniform dimensions. Third, we have waste incident to running up blocks and getting them to a shape where they will produce a thin continuous sheet of veneer. The fourth channel is that of defects developed in timber in the process of cutting and of stock damaged from one cause or another while cutting.

Taking these in the order mentioned, we have first the matter of cores. The cores or center pieces left in the rotary veneer machine ordinarily vary in size from six to ten inches. Perhaps eight inches would be an average, though much depends upon the nature of the

timber and the length of the blocks being cut and the size of the machines and chucks in use.

In districts where lots of pine is worked into fruit box stock and light package material, small machines are used working on short blocks, and the core pieces seem to vary in size from four to six inches. Large cores are very rarely seen in places of this kind. Turn from that, however, to a veneer plant cutting door stock and other large dimensions in veneer and one may find lots of cores nine and ten inches in diameter, sometimes as large as twelve inches. This is because it takes heavy machines and large chucks to hold the blocks and cut this class of veneer.

There is a way to save some of this core waste, and the veneer manufacturing trade is beginning to turn more attention to it. The simplest, and so far the most practical proposition for saving in the core waste, is to use some smaller machines for rehandling the cores and getting as much good veneer out of them as practical.

The way this matter is handled at one progressive plant is to take the cores immediately from the big machines to a smaller machine and work them down while they are still warm. If the big machine is cutting short blocks, the core may go immediately from one machine to the other. If the blocks of the big machine are too long to go into the small one, or if the ends have been battered up with the chucks, the ends are trimmed off to solid wood, making the block somewhat shorter. If the blocks from the big machines are of extra long length they are cut into two short blocks, then swung into the small machine and work down to a very small core. A big swing cross-cut saw serves to do the end trimming and the cutting of the blocks in two when necessary, and with this arrangement quite a lot more of the available veneer product is obtained than would be practical without it. Occasionally in the working of a sound log that is small originally, the little machine may get practically as much good veneer from the core as was secured primarily from the block by cutting on the big machine. Indeed there are many instances where the small machines get some excellent product from the cores. In other cases the product from the cores will not make a good face veneer—it makes fillers and backs and can be utilized to better advantage than it is possible to utilize the core in any other way. There has been enough experimenting along this line to demonstrate that it is quite practical to reduce the core waste in veneer making materially by the use of small machines for handling the light blocks and for handling the heavy cores from the larger machines.

End waste comes from the allowance made in the length of veneer blocks for trimming. It is pretty much the same allowance that is made in cutting saw-logs, with the difference that it is made oftener because the average veneer block is only about 1/4 the length of the average saw-log. The end allowance is practically the same so that in working up timber into veneer blocks there is four times the waste in end trimming that there is in the sawmill for trimming purposes.

Two general plans suggest themselves for closer utilization purposes. One is to take more pains in the work of cutting logs into blocks and reduce this allowance for end waste by closer manipulation. The other idea which suggests itself is to dispense with the core knives used for trimming the ends of veneer sheets which will permit using shorter blocks, and do the end trimming with saws after the veneer stock is dried. It ought to be practical, by a little exertion along the line of closer utilization, to reduce the amount of this end waste materially.

Some waste incident to rounding up a log or block in the veneer machine, or slag waste as we might term it, can be eliminated in many plants by the exercise of more care in centering blocks. Where blocks are carelessly centered in the machine there is an unnecessary amount of this slab waste. Where they are carefully centered and the waste is heavy because the block is not round originally we have a form of waste that is practically unavoidable. It may be practical in many instances to save this and work it into dimension veneer and utilize in the veneer work itself quite a lot that ordinarily goes into the wood pile.

The waste incident to defects in the block and in cutting is a waste that depends partly on the skill of the operator and the condition of the machine and partly on the nature of the timber being worked. Given a good sound block and machine in good condition with a sharp knife, there should be very little waste incident to damage in cutting. Perhaps the heaviest waste in cutting comes from blocks splitting before they are worked down. This may be checked a little by careful handling. The general proposition of reducing waste under this

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head involves the use of good machinery operated only by skilled, competent men supervised by a foreman who will insist upon the machines doing their work right and getting as much good stock as possible out of every block.

What is true of the veneer cutting end is equally true of the veneer using. There is waste in using veneer as well as in cutting it. It will probably average from twenty-five to thirty per cent. and may go as high as fifty per cent. in some instances. It will never be possible to prevent waste in this work entirely, but it should be practical to reduce the amount of waste through the exercise of care and thoughtfulness in selecting and working veneer.

Part of it is a matter of selection and of fitting veneer to the work and part of it is a matter of closer manipulation just as in the case of the end waste and the core waste. In trimming veneer and in making up panels, allowances are made for end trimming and for side trimming, for cutting to exact size, and sometimes these allowances are made with such a liberal hand that they unnecessarily increase the waste. More care in the work and closer manipulation will reduce this materially, and thoughtfulness and care in cutting and trimming veneer will make it practical to use a fair percentage of trimmings from one job on another and thus utilize material that otherwise goes to waste.

So both in the making and in the using of veneer there are many opportunities to use up the product closer and reduce the item of waste, and after all is said, this is the best utilization that can be devised for veneer waste, and it holds generally for wastes of all classes and kinds.—J. C. T. in *Hardwood Record*.

System in Business Affairs

So much that is wordy and dull has been written and said in connection with "system" in business affairs that a concise discussion of the subject, in forcible words, is refreshing and important. We reprint from an exchange, the following; knowing that it will appeal to lumbermen, manufacturers, wholesalers and retailers:—

"Success or failure of any business enterprise rests almost wholly with the ability of its manager. It is true that this rule does not always apply because we have examples of men of small ability but phenomenal success as well as examples of failures where able men have presided. But these cases are the exception rather than the rule and there is no question but that the greater success in business results from the ability of its management. A location may be poor, and trading light, but even such conditions can be overcome by the personally capable manager. All success is, in the first place, based on system. System can best be promoted through the keeping of records and through comparison of these records to learn the short cuts to progress. Records are the foundation of all progress, whether of the nation, the business corporation, a private institution, or the individual life of any human being. Making use of immediate, reliable, adequate and permanent records is the first practical principle a man entering business has to contend with. It has long been the basis of system employed by great business institutions, but many private individuals and personal enterprises do not place the importance on this department that they should, because it sometimes demands time they think can be put to more profitable advantage in other ways. As a consequence, many of these records are half kept and their value lost. It is only through the keeping of records that our business experiences become of value. What is done is done, but what is yet to be done lies in the hands of the individual to mold or mar as he is able. His ability is a result of his experience and that experience should become the basis of his schedule for the future. A schedule to be of value must be definite. The guess work must be eliminated and concrete data, material and equipment substituted. Railroad companies lay out their work in advance and the time table is a good example of their schedule.

Standardization of Methods

"A thing begun and ended on time and performed in the way it was intended is of greater benefit to the developing business man than a half a dozen things half done. A mislaid note book, tool, or instrument of any kind has caused endless waste of time. Carelessness about equipment on a larger scale has meant destruction of property and injury or death to mankind. Between these two extremes occur thousands of cases of daily waste in life, property and energy through unstandardized conditions. It is simply a matter of the right thing in the right place at the right time. Much of our great national fire loss could be prevented by having a systematic way of disposing of all waste and the making of regular inspections to the end of removing all unnecessary hazards. All of this is standardization of methods. Doing a thing over and over again in the same manner until the right operation becomes a habit. It is the surest way to break away from tradition and avoid guess work.

Records for Reference

"For many people, thought and purpose are elusive things, hard to control, and difficult to retain. Although memory in these cases

should be called upon to do service, the value of crystalizing thought and purpose into written words is a character of records indispensable. The aggressive business man is forever and always casting about for newer principles and more short cuts to a specified end. To make a permanent record of this, these same men make time and motion studies of their own day's guides for saving time, and as a means of inspiration to the strengthening of the will and in some other practical ways. In a short space of time this system becomes a producer of great results. Ideals are always the parts toward which the human craft is steered. Without them humanity loses ambition and without ambition a man becomes the slave to other and greater powers. An ideal is the most practical, fundamental thing in man's life. The practice of getting and attaining minor things is developing a spirit which in the end helps to gain and attain the greatest of man's ideals. It is this one thing alone that marks the world's progress and all men who become successful men must harbor within themselves the desire of attaining some definite ideals. To overtake this ideal, however, common sense must be used, and safe and sound judgment govern every step toward the desired end: Unwise judgment has in it every element of disaster. Progress resulting from careful judgment at times seems a trifle slow in developing, and for this reason men are often apt to forget their better judgment and plunge. One leap of this nature often tears down all of the good resulting from previous progress under the guidance of better judgment. It is said that no obstacle is so great that there is not some way around it, under it, or through it. To the man who is governed by careful judgment, these obstacles have less terror, but to the haphazard individual every obstacle becomes a new one, whether he has surmounted a similar one or not and business life must become a daily terror.

Progress Requires Energy

"Physical and mental laziness, of course, never becomes a power in successful upbuilding. Lack of concentration, unhealthful habits, pleasure madness, are some of the things which get hold of our young men of the present age and is a state of mind which does not permit of the development of more practical and efficient methods. It is this class of men who bring up the rear of our commercial armies, and because of their lack of will power are doing injustice to themselves, their community and society in general. To be worth one's hire is one thing, but to be worth more than one's hire should be a condition strived for by all. To make yourself want what you want hard enough to work for it is to exercise oneself in self discipline. One of the greatest reasons why the majority of men fail to attain their ideal and get their reward is because they do not want them hard enough. One of the greatest principles of self development is personal energy. Whether a man really lives or merely exists depends almost wholly upon his willingness to develop his personal energy and willingness to do lends itself charmingly to the best results."

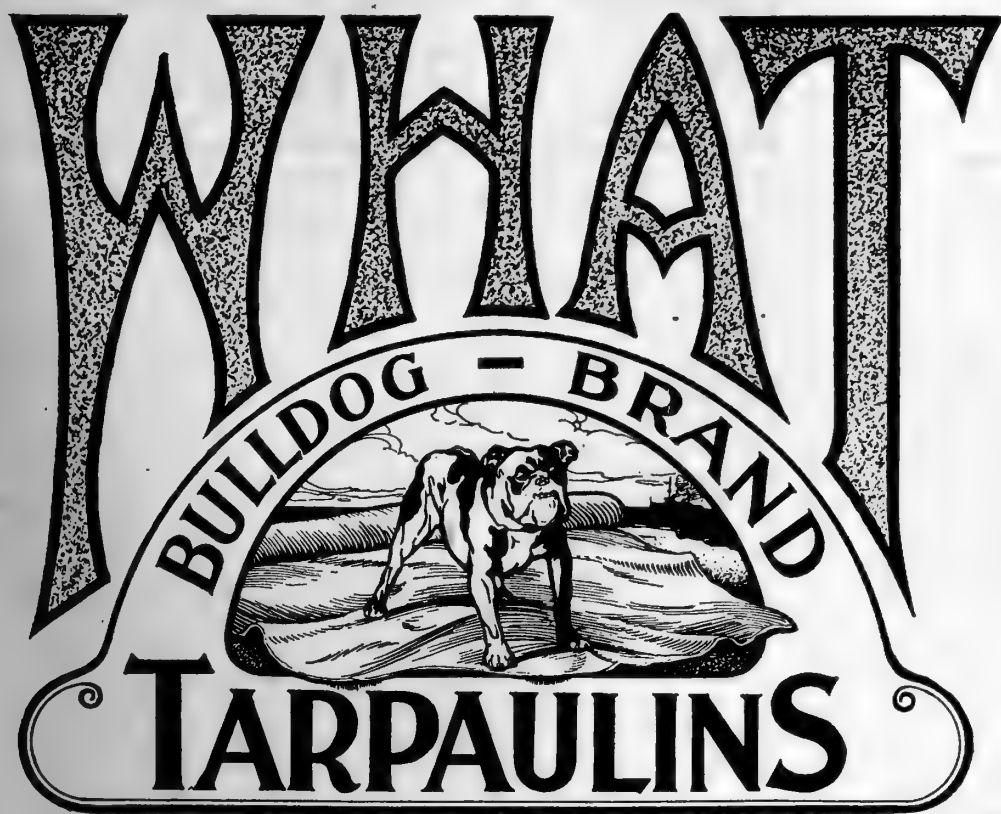
Sale of Lumber and Pole Stumpage in Idaho

The United States Government is offering for sale two tracts of timber on Lolo Creek within the Clearwater national forest, Idaho, aggregating 600 million feet of saw timber and 350 thousand cedar poles, together with a considerable amount of material for poling, shingles and posts. A large part of the timber is Idaho white pine, but the stands include yellow pine, lodgepole, spruce, western larch, Douglas fir, cedar, and white fir. The prices, which represent the lowest rates which will be considered for the saw timber, range from \$3.50 for green white pine to 50 cents a thousand for Douglas fir, western larch, and cedar. The prices of poles range from 5 cents to \$2.40 apiece, depending upon the size.

The Frank H. Harris Lumber Company, Limited

The attention of our readers is called to the advertisement of the Frank H. Harris Lumber Company, Limited, 32 Church Street, Toronto, wholesalers of hardwoods, oak flooring, chestnut, walnut and yellow pine. The president of this newly incorporated company, Mr. W. H. Harris, has had a long experience in the lumber industry both in Canada and the United States. He was formerly general manager of Houston Bros., Vicksburg, Miss., one of the largest manufacturers of hardwoods in the south. Mr. F. H. Harris, the secretary-treasurer, is well known to the Ontario trade, and has been in the southern pine business both in Toronto and the south for a number of years. The new firm have connections with some of the leading firms in the Southern States.

The Lieut-Governor of New Brunswick has named the following members to compose the Royal Commission to enquire into the recent charges preferred against Hon. J. K. Flemming, former Premier of the province, in connection with the administration of the provincial timberlands:—Sir Frederick E. Barker, formerly Chief Justice of New Brunswick, chairman; Hon. H. A. McKeown, Judge of the Kings Bench Division of the Supreme Court, and Mr. W. S. Fisher, of Emerson and Fisher, Limited, Merchants, St. John.



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EDGINGS

Ontario

W. F. Vanstone, Wingham, Ont., is considering the purchase of sawmill equipment including lath, heading and shingle machinery, to be operated at Blyth, Ont.

R. W. E. Burnaby, 45 Adelaide Street East, Toronto, will install a lumber yard and planing mill at Davisville, North Toronto. A site has been secured, 67 ft. x 325 ft.

Todd & Joynt, St. Helens, Ont., are seeking information as to prices of machinery for equipping a heading mill, also prices of a 40 or 45 h.p. engine to operate a sawmill.

Waterloo, Ont., has carried a by-law to make a loan of \$50,000 to the Globe Furniture Company. The company will erect two additions to their plant, at a cost of about \$125,000.

William Beatty Lands and Timber, Limited, has been incorporated with a capital of \$100,000, with head office at Parry Sound, Ont. The provisional directors are W. J. Beatty and I. E. Beatty.

The planing mill operated by Esdale & Douglas, Lisgar Street, Ottawa, was recently destroyed by fire. All the machinery, valued to \$3,000 was destroyed. The building was owned by A. G. Acres, Bank Street.

South America Cabinet Woods, Limited, has been incorporated with a capital of \$1,000,000, with head office at Toronto. The provisional directors are H. F. Welsh and C. J. F. Collier, both of Toronto, Ont.

A. Barnet & Company, Limited, has been incorporated with a capital of \$250,000, with head office at Renfrew, Ont. The provisional directors are A. J. E. H., T. F., and J. G. Barnet, of Renfrew, Ont., and J. C. Browné, of Ottawa, Ont.

In order to secure a piece of property adjoining their plant, upon which to pile lumber, the Otto Higel Company, manufacturers of piano actions, King and Bathurst Streets, Toronto, paid \$400 a foot making a total of \$24,000 for the 60 feet frontage.

The McEachern Tie and Timber Company, Limited, has been incorporated with a capital of \$40,000, with head office at Thessalon, Ont. The provisional directors are E. S. Perryman, of Chicago, Ill., U.S.A., J. A. McEachern and W. McGuire, of Thessalon, Ont.

The Abitibi Pulp and Paper Mills, Limited, 136 St. James Street, Montreal, have awarded the contract for their paper mills at Iroquois Falls, Ont., to Morrow & Beatty, Peterboro. The architect for the plant is Mr. Geo. F. Hardy, 309 Broadway, New York City.

The Ladder Lake Lumber Company, Limited, has been incorporated with capital stock of \$400,000 and head office at Toronto, to carry on a lumber manufacturing business. The provisional directors are G. Ruel, A. J. Reid, W. L. Pinkney, G. N. Pimprich and H. R. Burrows, of Toronto.

The McAuliffe, Davis Lumber Company, Ottawa, Ont., are enlarging their Duke Street mill to double its present size. The cost of the work will be about \$25,000. The enlarged mill will be about 100 ft. x 200 ft. It is expected that the machinery will be installed this month. It will include a large new rig saw, made by the Berlin Machine Works, Limited, Hamilton, Ont.

Philip Forbes, Lions Head, Ont., is constructing a sawmill on the site of the former mill belonging to Chas. Pedwell which was destroyed by fire last fall. The mill will be equipped with a Waterous pony band, and will be up-to-date in every way. Mr. Forbes has been interested in timbering in the Bruce Peninsula for the past fifteen or twenty years, but this is his first experience at the sawmill end of the industry.

Driftwood Lands & Timber, Limited, was recently incorporated with head office at Toronto and capital stock of \$1,000,000. The provisional directors are J. L. Ross and A. W. Holmstead of the firm of Ross & Holmsted, Barristers, 20 King Street East, Toronto. The promoter of the company is J. H. F. Blue, 20 King Street East, Toronto. The company have bought 47,407 acres of mahogany and cedar lands in Dutch Guiana. These lands are reported to contain a great quantity of mahogany, cedar, purple-heart and greenheart. The intention of the company is to erect a large veneering plant at some lake point in Ontario, possibly Oshawa.

Eastern Canada

It is reported that H. W. Woods will not operate his mill on the Nerepis, N.B., this year.

The Wilson Box Company have rebuilt their mill at Westfield, N.B., and it is now thoroughly up-to-date.

La Compagnie St. Ramuald d'Hardwood Flooring Company, Limited, has been registered at St. Romuald, Que.

The sawmill belonging to Hamel & Allard at Ancienne Lorette, P.Q., was recently destroyed by fire. The loss was covered by insurance. The mill will be rebuilt and new machinery will be required.

The Riddle, Robbins Lumber Company which constructed a mill last year at Hatfield Point, Kings County, N.B., will not operate this year on account of some litigation between those who are interested in the company.

Timber Properties and Securities, Limited, has been incorporated with a capital of \$50,000, with head office at Montreal, Que. The provisional directors are W. R. L. Shanks, advocate, and F. G. Bush, both of Montreal, Que.

The mill at Upper Gagetown, N.B., recently operated by the Warren Company, will not be running this season on account of the death of the owner. It is now being offered for sale by L. G. Crosby of St. John, a former part owner.

The sale by auction of the timber limits of Messrs. H. M. Price & Company, lumber merchants, Quebec, now insolvent, will be held on August 5th next, at the offices of Messrs. La Rue & Trudel, accountants, 126 St. Peter Street, Quebec. The limits include a total of 527 square miles, along the rivers

St. Jean, Saumon, Magpie, and Chambers; also a certain area of freehold land to be used as a mill site. Particulars may be had from A. F. C. Ross, c/o P. S. Ross & Sons, 142 Notre Dame Street West, Montreal, or Eugene Trudel, c/o La Rue & Trudel, 126 St. Peter Street, Quebec.

The box factory belonging to the Turner Lumber and Pulpwood Company, of Limolieu, P.Q., was recently destroyed by fire. The loss, amounting to \$2,000 was covered by insurance. The company will rebuild and will require new machinery.

The Federal Paper Company, Limited, Montreal, P.Q., has been incorporated with capital stock of \$100,000. They are given power to manufacture, buy and sell pulp, pulpwood, etc. Mr. J. J. Meagher, 232 St. James Street, Montreal, is interested in the company.

Christie's woodworking factory on City Road, St. John, N.B., was completely destroyed by fire recently. The total value of the plant was about \$40,000 and there was insurance to the extent of \$20,000. Mr. Christie reports that a new factory will probably be built.

The Boyer West Realty and Lumber Company, Limited, has been incorporated with a capital of \$49,000, with head office at Montreal, Que. The provisional directors are T. Rinfret, K.C., J. E. Billette, A. R. W. Plimsoll and R. Brodeur, advocates, all of Montreal, Que.

The Lower Ottawa Forest Protective Association, Limited, has been incorporated with a capital of \$10,000, with head office at Hull, Que. The provisional directors are Hon. W. C. Edwards and W. C. Hughson, of Ottawa, Ont., G. H. Millen, of Hull, Que., J. B. White, of Montreal, and R. M. Kenny, of Buckingham, Que.

A staff of engineers under the direction of Mr. A. G. McIntyre has commenced the preparation of plans for the new pulp mill which is to be erected by the Bathurst Pulp & Paper Company, at Bathurst, N.B. It is expected that nearly a thousand men will be employed in the construction of the plant, which will be built entirely of concrete and steel.

The sawmill belonging to Joseph Bedard & Sons, at Bedard's Mills in the township of Cleveland, near Richmond, P.Q., was recently destroyed by fire. The loss is placed at about \$5,000 and was partly covered by insurance. A quantity of lumber was also destroyed. The mill will be rebuilt at once, as the company have a large quantity of logs on hand to be cut.

Western Canada

G. D. Benoit, lumber merchant, of Dollard, Sask., has been succeeded by J. A. Pamchand.

The Canadian Cedar Lumber Company, Vancouver, B.C., has bought the saw mill operated by W. H. Day, South Vancouver.

The Forest Products Company, Limited, has been incorporated with a capital of \$100,000, with head office at Vancouver, B.C.

The James Brookes Woodworking Company, Limited, has been incorporated with a capital of \$15,000, with head office at East Burnaby, B.C.

The Sunset Lumber Company's plant at Bradner, lower Fraser valley, has been bought by Craig & Taylor, formerly with the Mission Lumber Company.

The Federal Lumber Company has acquired the cedar mill on the north arm of the Fraser River, formerly operated by the Leading City Lumber Company.

The M. B. King Lumber Company, which recently bought limits from D. K. Campbell, is erecting a mill on the B. C. Electric Railway, south of New Westminster.

Charles Hartnell & Son, Vancouver, have taken over the sawmill at Port Hammond, on the main line of the Canadian Pacific Railway, twenty-five miles east of Vancouver.

The Western Canada Manufacturing Company, Limited, has been incorporated with a capital of \$100,000, with head office at Vancouver, B.C., to carry on business as lumber merchants, etc.

The British Canadian Lumber Company has started its mill at Coal Harbor, Vancouver. It has had a number of logs in the water, and as the teredo is getting busy it was deemed advisable to get the mill going again. It is expected that operations will be continued throughout the summer.

A report from Vancouver, B.C., states that the Vancouver Lumber Company, Limited, are preparing to erect a shingle mill at a cost of \$100,000 at Roche Point, Burrard Inlet, B.C. The plant will have twelve shingle machines. The company are also erecting a wharf, completing a large frame boarding house and making a number of alterations to their cedar mill.

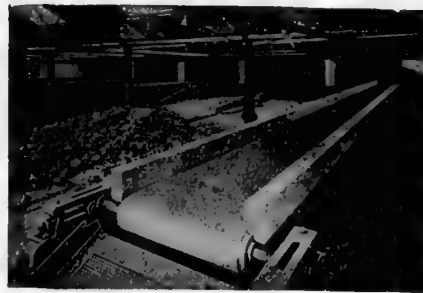
A deal in standing timber in the neighborhood of Fort George, B.C., has just been carried out by the Government of the Province which has sold to Mr. H. N. Sereth, of the Riverside Lumber Company, of Calgary, 32,000,000 feet of lumber at the following prices: Douglas fir, \$2.54 per 1,000 feet; spruce, \$1.07 per 1,000 feet, and cedar, \$1.06 per 1,000 feet. The total value of the timber reaches \$37,000, the purchasers to cut this within the next two or three years and leave the ground as nearly as possible ready for settlers, with the brush burned off.

A report was recently published to the effect that the McLaren Lumber Company of Blairmore, Alta., intends to erect a mill at a cost of \$200,000. This company has been acquired by eastern capitalists who will spend a large sum on important additions to the plant. Mr. E. A. Cunningham of the Rogers-Cunningham Lumber Company, Lethbridge, Alta., will be the general manager of the company. The McLaren limits are between the C. P. R. Crow's Nest branch and the south fork of the Old Man river. The new mill will be of large capacity, and will manufacture lumber of the standard mill stock sizes and patterns. The organization will be capitalized at \$1,500,000.

The Crossing Lumber Company, Winnipeg, Man., whose mill is located at Minaki, Ont., report that their logging operations last winter were entirely successful. They expect to have about 3,000,000 feet of lumber. They had a crew of 75 men and 32 horses in the woods. They have built a pier 160 feet long and cleared up all the debris on their property, expecting to put it on the market as a summer resort proposition this year. The G. T. R. have completed two large hotels, within half a mile of the mill, one a winter house, to be operated throughout the year and one a summer house to be opened on June 26th. The railway has also put into commission a launch 47 feet long running between the station and the hotel. The Crossing Lumber Company are therefore looking for an exceptionally busy season this year.

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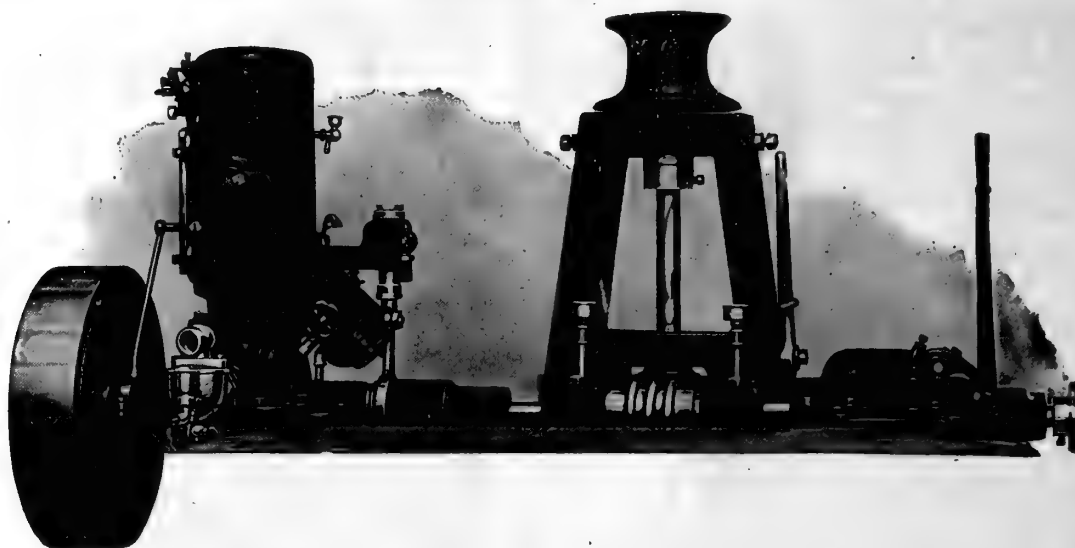
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The pointer is particularly well built.

Ribs and frame are bolt fastened; they are made of well seasoned white oak, steam bent where necessary.

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The Adam's Pointer has proved a good investment for many lumbermen. Write for catalogue and testimonials.



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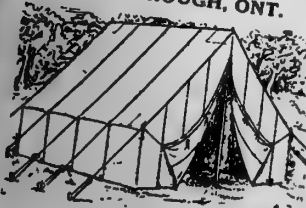
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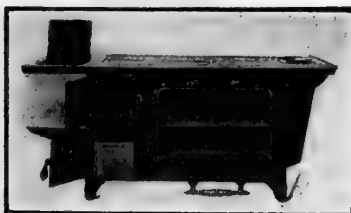
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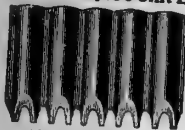
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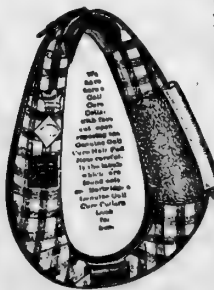
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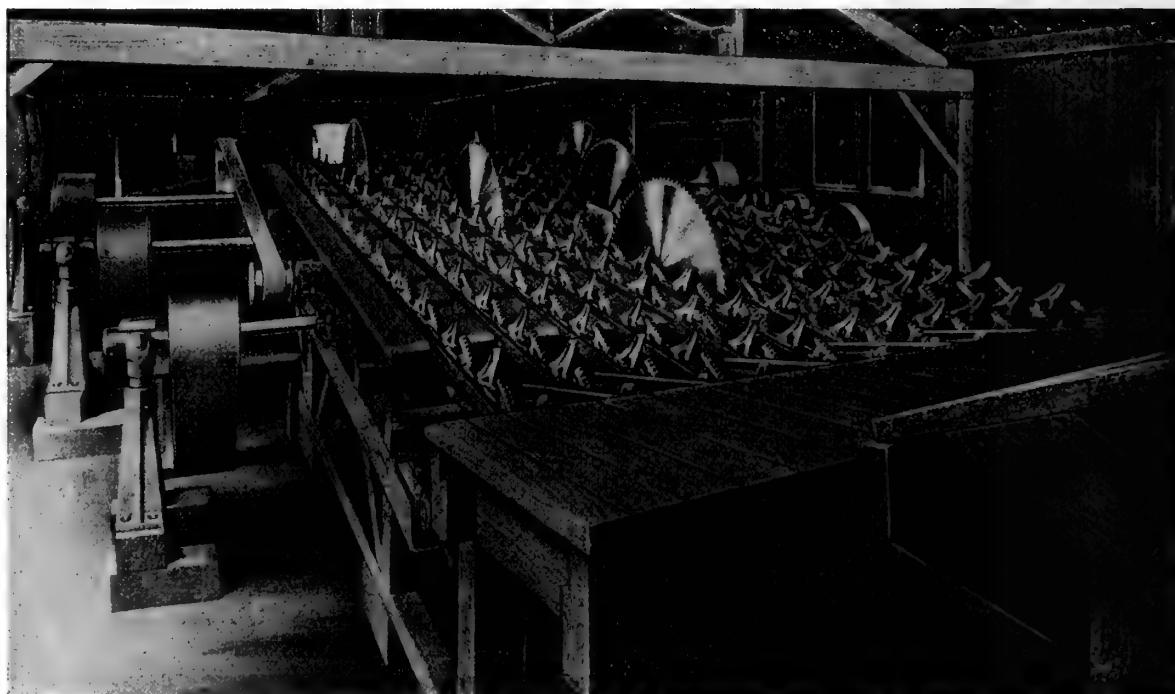
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The Ryther Multiple Saw Slasher will cut 1,000 logs and over per hour into absolutely Uniform Lengths — Highest Possible Efficiency — Lowest Cutting Costs, per Cord — Minimum Maintenance and Repair.

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OF ALL TYPES AND SIZES

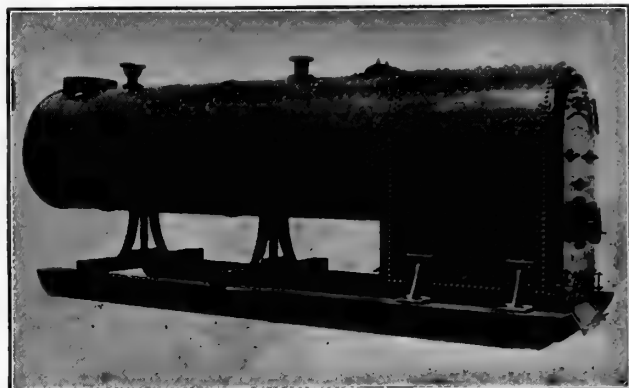
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We cater specially to the lumbering industries

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E. LEONARD & SONS,
LONDON, CANADA LIMITED

Agencies and Warehouses:—ST. JOHN, N.B. MONTREAL, QUE. TORONTO, ONT.
WINNIPEG, MAN. CALGARY, ALTA. VANCOUVER, B.C.



Locomotive Boiler on Skids

Atkins Inserted Tooth Cut Off Saw



The construction of this splendid Saw will appeal to you at once. It will save you lots of money if you have cut off work to do. It's the sensation of the Saw World. Making good wherever used.

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E. C. Atkins & Company

Makers of Sterling Saws

Factory, Hamilton, Ont.

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PEAVIES

Cant Hooks, Boom Chains, Timber Dogs

It is time to think about your logging equipment for the ensuing season. Let us figure on your requirements for Peavies, Cant Hooks, Timber Dogs, Boom Chains, and Shackles, Mill Chains, Forged Steel, Log Stamping, Hammers, etc.

Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

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ARGALL BROTHERS Three Rivers, Quebec

MERRITT MFG. CO., Lockport, N.Y.

Veneer Machinery

THE "MERIT" LINE of Veneer Cutting, Dimensioning and Drying Machinery is designed first, for veneer mills cutting high grade furniture and commercial veneer from expensive timber, and second, for basket, crate, box and barrel factories using cheaper veneer cut from the less expensive woods.



Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.

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"Wilson Bros." Flooring and Trim

"Wilson Bros." stamped on every piece of this flooring stands for Quality. Look for the name.

Hardwood and Pine

Interior Finish of all kinds

Also Hardwood Veneer Doors to Detail

We are equipped to fill large or small orders on short notice. Write us for prices.

Wilson Bros., Limited - Collingwood, Ont.



GOODHUE BELTING



FACTORY TO YOUR MILL

TO the saw mill and woodworking industries we offer an unusually good belting value in our "Acme Waterproof." This belting is specially made from the best hides to run in wet places where only the best quality belt can "make good." If you require any belting you should enquire into the merits of "Goodhue Belts" then you will buy a "Goodhue."

According to the conditions under which a belt has to run we recommend "Extra," "Standard" or "Acme Waterproof"—each brand the best quality but each made for a different service.

Send for particulars
and prices.

J. L. GOODHUE CO., LIMITED, Danville, Quebec

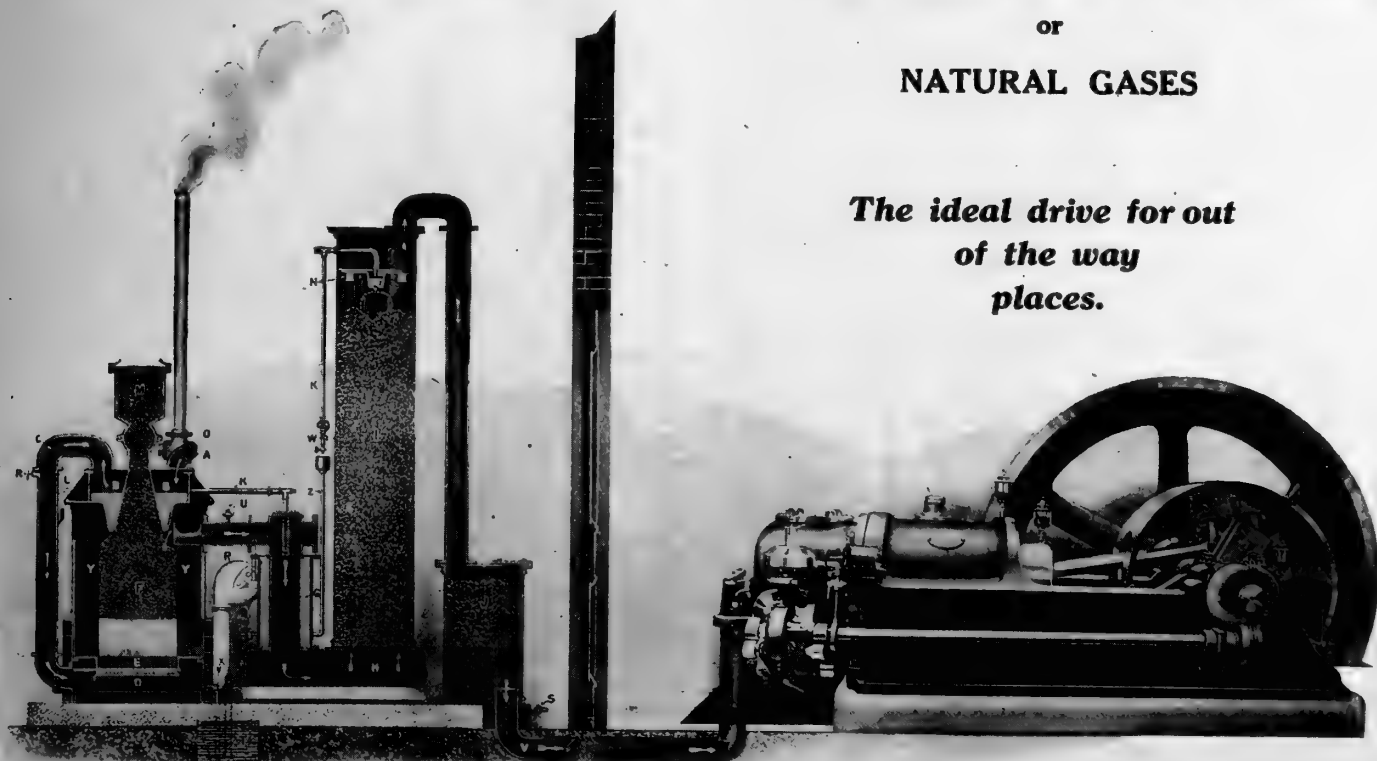
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for ANTHRACITE, COKE or CHARCOAL

for WORKING ON TOWN SUCTION

or
NATURAL GASES

*The ideal drive for out
of the way
places.*



SECTIONAL VIEW

Horizontal up to 180 B. H. P.

GEORGE ANDERSON & CO. OF CANADA, LTD., 617 Quebec Bank Bldg., MONTREAL

**The gathering
of the clans**



"On to Toronto!"

YOU have doubtless noted with gratification the great movement for honesty and square dealing which is revolutionizing American and Canadian business methods. Our goods, our salesmanship and our advertising are being cleansed and vitalized by the spirit of truth and sincerity.

As a result we see a growing public confidence in manufactured products and their advertising—a confidence which, if preserved and fostered, will decrease our costs, increase our profits, and become a business asset of incalculable value.

Foremost in the fight which has brought about this revolution stand the Associated Advertising Clubs of America, whose emblem is shown above. If you are a business man, interested in the manufacture, distribution, or selling of commodities of any nature, you should attend the Tenth Annual Convention of the A. A. C. of A. at

TORONTO

June 21-25, 1914

At this Convention you will hear the inspiring story of the manner in which these tremendous reforms are being effected. More than this, you will hear the problems of distribution, merchandising, salesmanship and advertising discussed by able and successful business men in a series of open meetings.

These meetings will cover the questions of chief interest to the 10,000 business men comprising the 140 clubs of the A. A. C. of A.—*your own* problems included.

EDWARD MOTT WOOLLEY the famous writer on business topics, has written a booklet entitled "*The Story of Toronto.*" This booklet describes in a forceful, intensely interesting manner, the wonderful work the A. A. C. of A. are doing for clean advertising and square business methods, and the significance and importance of the Toronto Convention. This booklet will be sent free to all business men asking for it on their business stationery—together with detailed facts as to the convention programme and rates for accommodations.

Address Convention Bureau

Associated Advertising Clubs of America
TORONTO **CANADA**



THE PETER GERLACH CO.
MANUFACTURERS
AND BUILDERS OF

SAWS
CIRCULAR AND CYLINDER

MACHINERY
STAVE HEADING AND BARREL

TOOLS
SAW AND LOGGING

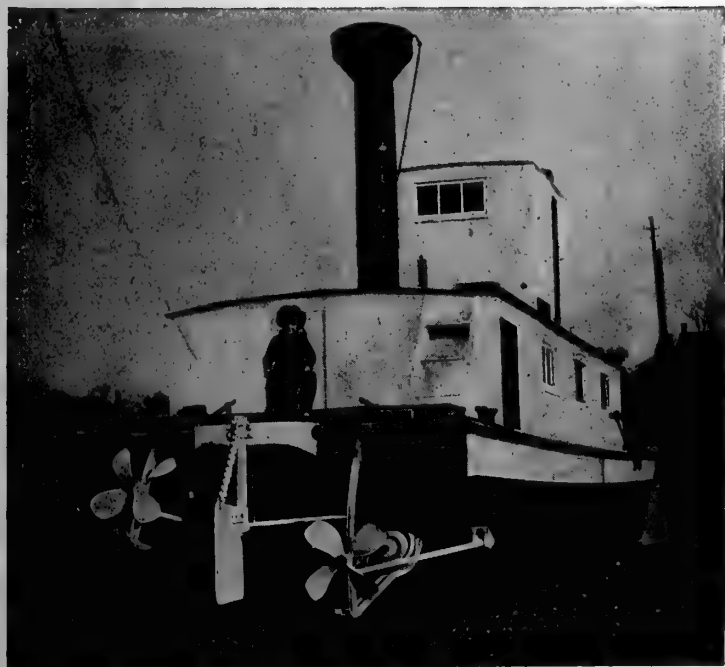
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STAVES	HEADING
BARRELS	KEGS
COOPERAGE	WOODEN WARE
HOOPS	HANDLES
PAIS	TUBS
CHURNS	FREEZERS
CANDY PAIS	FISH KITS
BOX BOARDS	BOTTOMS
CHAIR STOCK	SHINGLES
CLOTHES PINS	LUMBER

COMPLETE PLANTS
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BARRELS, KEGS, STAVES AND HEADING
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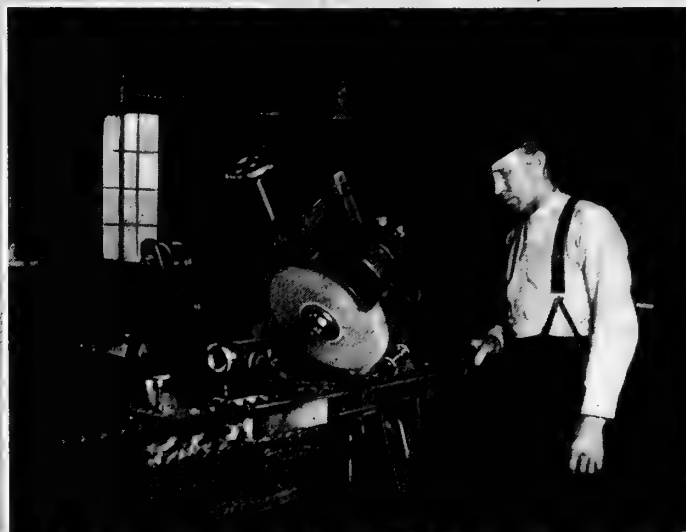
**Not altogether what we
say but what users say**

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs,
in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

**"THEY SURE DO RUN
UNIFORM"**



A Michigan saw filer of many years' experience says this about

Aloxite Saw Gumming Wheels

*His tests and his results
prove it*

He finds that they cut fast and clean without burning — that they hold their shape — show long life and are positively uniform in grit and grade. ¶ A study of saw-filing requirements and conditions enables our service department to put

*The Right Wheel in the
Right Place*

**THE
CARBORUNDUM COMPANY**
NIAGARA FALLS, N. Y.

New York Chicago Boston
Philadelphia Cleveland Cincinnati
Grand Rapids Milwaukee
Manchester, Eng.



CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	\$55 00	57 00
1 1/2 inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1 1/2-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	45 00
5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	36 00	36 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
4/4 No. 3 cuts	28 00	28 00
5/4 and 6/4 No. 3 cuts	32 00	32 00
3/4 No. 3 cuts	33 00	33 00
1-in. Good Shorts	40 00	45 00
1 x 4 and 5 com. and dressing	25 00	26 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	32 00	34 00
1 x 12 common and dressing	36 00	38 00
1 x 10 and 12 mill cut stocks	24 00	24 00
1-in. mill cut sidings	22 00	22 00
5/4 and 6/4 x 4 m.r., m.c. out	26 00	26 00
5/4 and 6/4 x 5 m.r., m.c. out	26 00	26 00
5/4 and 6/4 x 6 m.r., m.c. out	28 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out	28 00	28 00
5/4 and 6/4 x 10 m.r., m.c. out	33 00	33 00
5/4 and 6/4 x 12 m.r., m.c. out	36 00	36 00
2 x 10 common	30 00	32 00
2 and 3 x 12 common	30 00	32 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common	27 00	29 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts	20 00	20 00
1-in. mill run Norway	23 00	23 00
2-in. mill run Norway	25 00	25 00
Norway, c. and cf. 1-in.	33 00	34 00
Norway, c. and cf. 1 1/2-in.	35 00	36 00
Norway, c. and cf. 2-in.	35 00	36 00
Spruce mill cuts	20 00	20 00

Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	20 00	20 00
1 x 6-in. x 9 to 16 ft.	23 00	23 00
1 x 8-in. x 9 to 16 ft.	23 00	23 00
1 x 10 and 12 in. x 9 to 16 ft.	25 00	25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	22 00	22 00
1-in. No. 2, 6-ft. to 16 ft.	17 50	17 50
2 x 4 to 12, 10 and 16 ft.	24 50	24 50
2 x 4 to 12-in., 18 ft.	23 50	23 50
2x4 to 12-in., 18 ft.	25 00	25 00
2 x 4 to 12-in., 20 ft.	28 00	28 00
2 x 4 to 12-in., 22 ft.	27 00	27 00
2 x 4 to 12-in., 18 ft.	23 50	23 50
2 x 4 to 12-in., 24 ft.	30 00	30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	18 00
Clear in B.C. cedar, kiln dried.	55 50	65 50
Douglas Fir		
Dimension Thuber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12,		
12x14, 14x14, 14x16 up to 32	32 50	32 50
ft.		
6x10, 6x12, 8x10, 8x12, 10x16, 12		
x16, 16x16, 16x18, 18x18, 20x		
20, up to 32 ft.	33 00	33 00
6x14, 8x14, 12x18, 18x20, up to		
32 ft.	33 50	33 50
6x16, 8x16, 10x18, 12x20, 14x20,		
16x20 up to 32 ft.	34 00	34 00
10x20, up to 32 ft.	34 50	34 50
6x18, 8x18, up to 32 ft.	35 00	35 00
6x20, 8x20, up to 32 ft.	36 00	36 00
Timber in lengths over 32 feet take the		
following additions: 33 to 35 ft., 50c; 36 to		
40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51		
55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft.,		
\$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18;		
76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	44 50
No. 1 and 2 clear 1-in. Fir rough	45 00	45 00
No. 1 and 2 clear 1 1/4, 1 1/2 and		
2-in. Fir rough	47 00	47 00
1 1/2-in. No. 1 4-ft. pine lath	4 50	4 50
1 1/2-in. No. 2 4-ft. lath	4 20	4 20
1 1/2-in. 32-in. pine	1 00	1 00
1 1/2-in. No. 1 4-ft. hemlock lath	3 75	3 75
1 1/2-in. mill run hemlock lath	3 50	3 50
X pine or cedar shingles	1 05	1 05
XX pine or cedar shingles	2 25	2 25
XXX pine or cedar shingles	3 20	3 20
XX B. C. cedar shingles	2 35	2 35
XXX 6 butts to 2-in.	3 20	3 20
XXXX 6 to 23-16-in.	3 40	3 40
XXXXX	3 70	3 70

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1 1/2 and 2-in.	60 00	60 00
Ash, white, No. 1 common	45 00	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	39 00	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	39 00	39 00
Birch, No. 1, com. and bet., 4/4	33 00	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, No. 2 and 3, common	18 50	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nds, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4		
and 16/4	75 00	75 00
White oak, plain, 1st and 2nds, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1 1/2		
and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4		
and 16/4	75 00	75 00
White oak, 1/4 cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, 1/4 cut, 5/4 and 6/4, 1sts		
and 2nds	88 00	88 00
White oak, 1/4 cut No. 1 common	65 00	65 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1 1/2-in. & 1 1/2-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. & up	40 00	42 00
Pine good strips:		
1-in.	40 00	42 00
1 1/2-in. and 1 1/2-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1 1/2-in. and 1 1/2-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1 1/2 and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1 1/2, 1 1/2 and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00	25 00
Pine, box boards:		
1" x 4" and up, 6'-11'	18 00	19 00
1"x3" to 6", 12'-16"	19 00	20 00
Pine mill cuts, strips and sid-		
ings, 1-in. x 4-in. and up, 12-		
ft. and up	17 00	19 00
Pine mill cuts stock 1 x 12	21 00	22 00
Mill cut shorts, 1-in. x 4-in.		
and up, 6-ft. to 11-ft.	16 50	17 00
O. cuts r & w p	14 00	16 00
Red pine, log run:		
mill cuts out, 1-in.	18 00	20 00
mill cuts out, 1 1/4-in.	19 00	21 00
mill cuts out, 1 1/2-in.	19 00	21 00
mill cuts out, 2-in.	22 00	24 00
Mill cuts, white pine, 1"x7"		
and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16"	18 00	20 00
1"x9" 10" and up, 12'-16"	22 00	24 00
1 1/2"x7" 8-9" and up, 12'-16"	22 00	24 00
1 1/2"x10" and up, 12'-16"	22 00	24 00
1 1/2" & 2"x12" and up, 12'-16"	25 00	26 00
Spruce 1-in. clear (fine dressing		
and B)	25 00	27 00
Hemlock 1-in. cut	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16"	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead cuts		
out	22 00	24 00
Basswood log run mill cuts out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better,		
1, 1 1/2, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1 1/2-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 85
Mill run white pine	4 00	4 25
Spruce, mill run 1 1/2-in.	3 25	3 25
Red pine mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx	1 75	1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx	2 00	2 00
Spruce logs (pulp)	18 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. av-		
erage, according to lineal	70	75
Oak—Michigan and Ohio		
By the dram, according to average		
and quality	65	72
Elm		
By the dram, according to average		
and quality, 40 to 45 feet	80	90

By the dram, according to average and quality, 30 to 35 feet 60 65

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 23
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 17 00 19 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1 1/2 and 1 1/2 in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1 1/2 in., 8-in. and up wide 55 00
1 1/2 in., 8-in. and up wide 57 00
2 in., 8-in. and up wide 60 00
2 1/2 and 3 and 8-in. and up wide 75 00
4 in., 8-in. and up wide 85 00

No. 2 Cuts

1 in., 6-in. and up wide 31 00
1 1/2 in., 6-in. and up wide 42 00
1 1/2 in., 6-in. and up wide 44 00
2-in., 6-in. and up wide 47 00
2 1/2, 3 and 4 in., 6-in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide 24 00
1 1/2 and 1 1/2 in., 6-in. and up wide 33 00
2-in., 6-in. and up wide 33 00
2 1/2, 3 and 4-in., 6-in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 13 in. and up 34 00
1 1/2, 1 1/2 and 2-in. 30 00

No. 1 Barn

1 inch 81 00 45 00
1 1/2, 1 1/2 and 2-in. 36 00 45 00
2 1/2 and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1 1/2, 1 1/2 and 2-in. 30 00 36 00
2 1/2 and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1 1/2, 1 1/2, 2-in. 20 00 25 00

Box

No. 1, 1, 1 1/2, 1 1/2, 2-in. 22 00 25 00
No. 2, 1 1/2, 1 1/2, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1 1/2, 1 1/2 and 2-in. 20 00
No. 2 17 00 18 00

Lath

No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.</

*The
Mark*

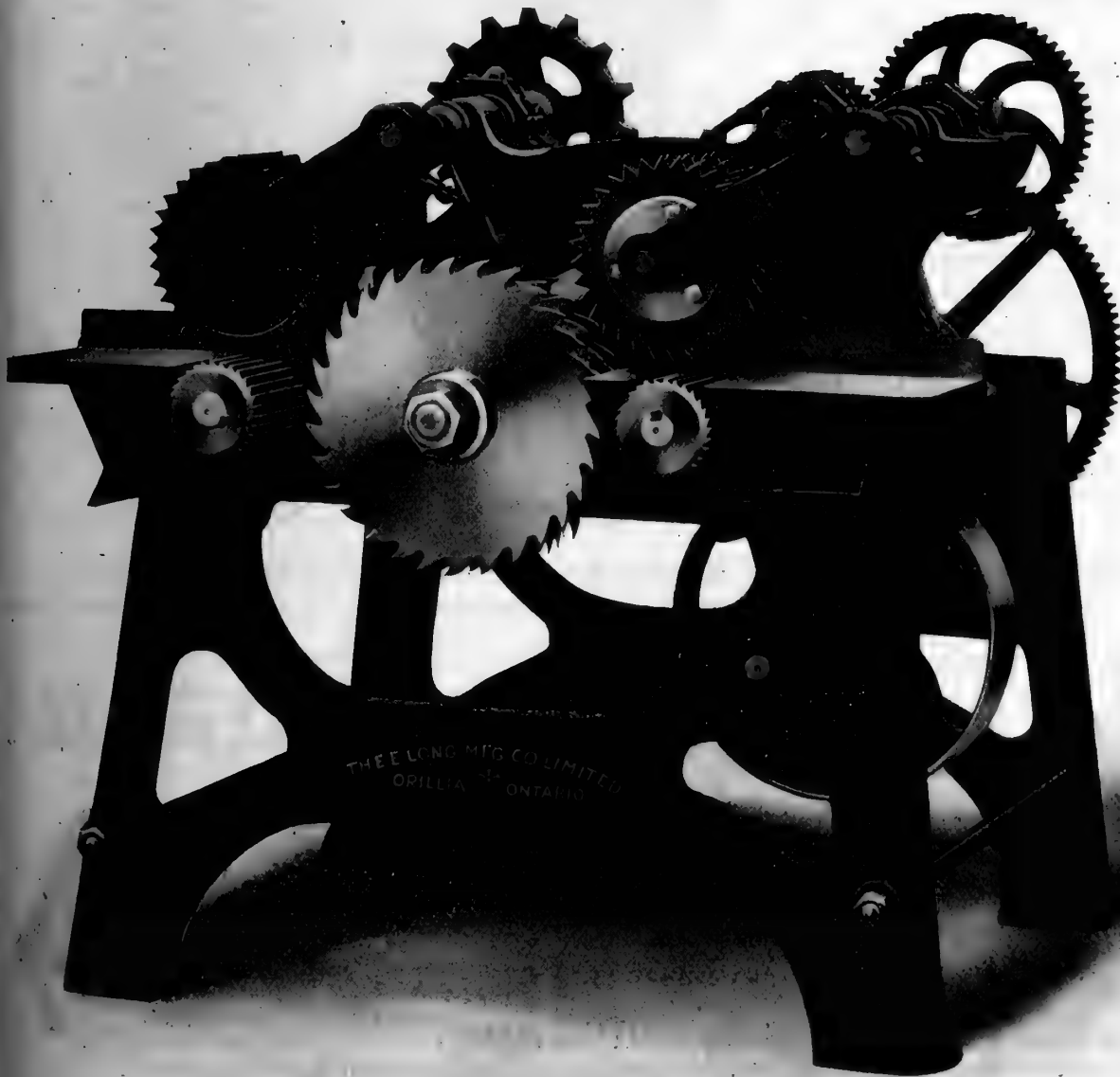
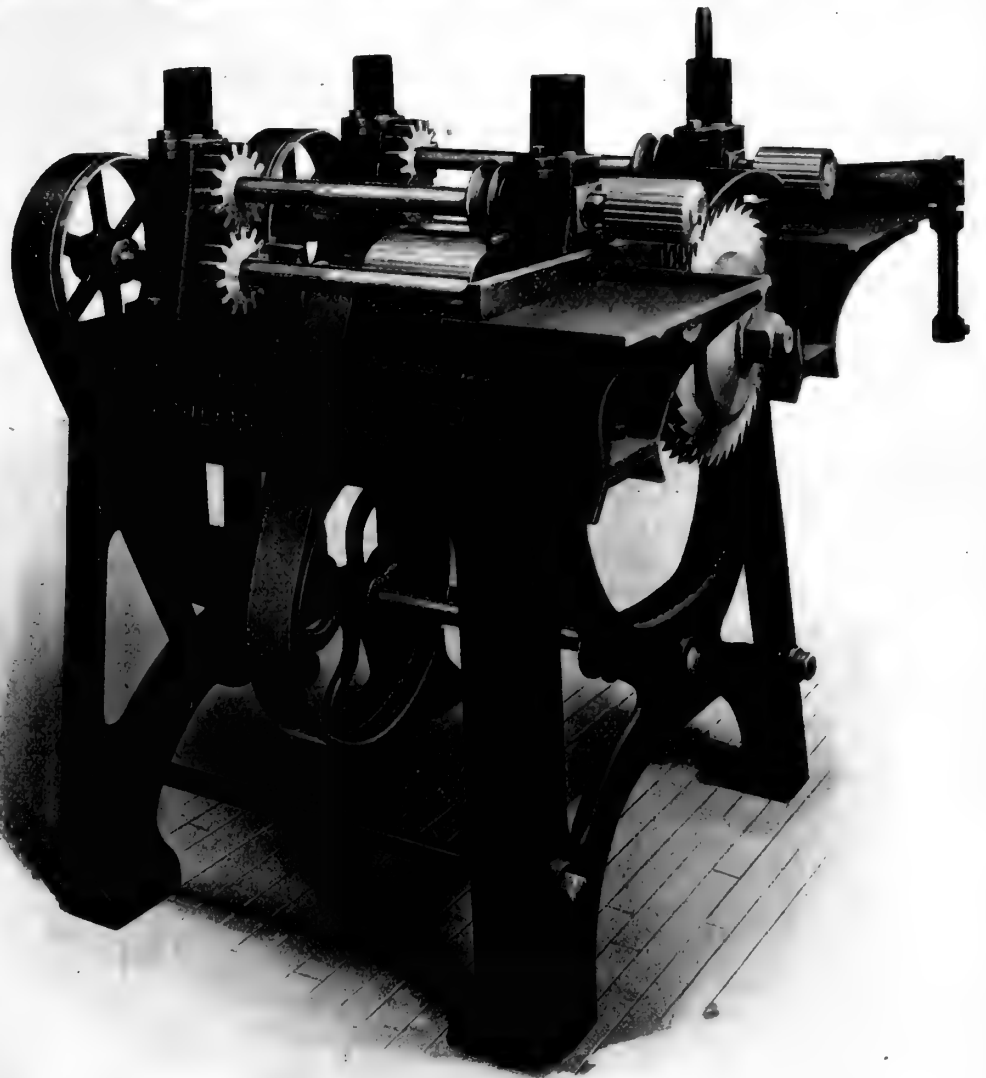


*of
Quality*

For the mill of medium size, our No. 2 Lath Machine and Bolter solves the problem.

You can get them combined in a single machine, if space is an object.

See adv. on page 78.



Drop us a line, and receive the most comprehensive Lath Machinery Catalog in America.

**The E. Long
Mfg. Co.,
Limited
Orillia - Canada**

Represented by—
Robt. Hamilton & Co.,
Vancouver
Gorman, Claucey &
Grindley, Ltd.,
Calgary and Edmonton
The Stuart Machinery
Co., Ltd., Winnipeg
Williams & Wilson,
Ltd., Montreal

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24

RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22

SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22

BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23

PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27

ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	96 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00		
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00		

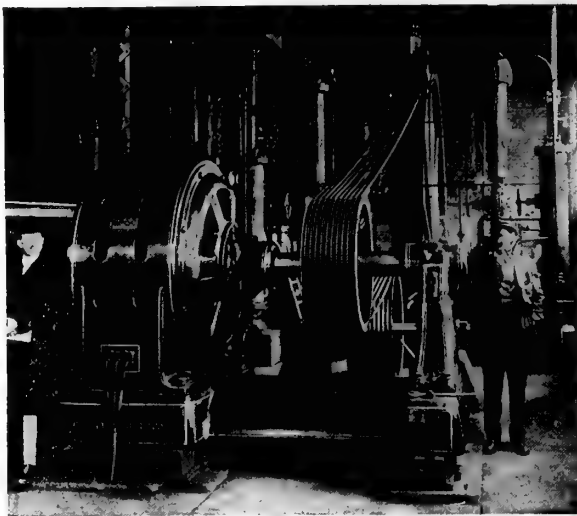
No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00	001 1/2-in. spruce laths	4 40
Barn Boards, No. 1, 1 x 12	48 00	50 00	1 1/2-in. spruce laths	3 80
No. 1, 1 x 10	38 00			
No. 1, 1 x 8	37 00			
No. 2, 1 x 12	40 00	42 00		
No. 2, 1 x 10	35 00	36 00		
No. 2, 1 x 8	34 00	35 00		
No. 3, 1 x 12	32 00	33 00		
No. 3, 1 x 10	29 00	30 00		
No. 3, 1 x 8	29 00			

Canadian spruce boards	25 00			
Spruce, 10 in. dimension	28 00			
Spruce, 12 in. dimension	29 00			
Spruce, 9 in.	25 00			
Spruce, 8 in. and under dimen.	24 00			
10 and 12 in. random lengths, 10 ft. and up	26 00			
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00		
All other random lengths, 7-in. and under, 10 ft. and up	21 00	21 50		
5-inch and up merchantable boards, 8 ft. and up, p 1s	23 00			
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	23 00			

New Brunswick Cedar Shingles

Extras	3 55
Clears	2 10
Second clears	2 80
Clear whites	2 00
Extra 1s (Clear whites out)	1 50
Extra 1s (Clear whites in)	1 00
Red Cedar Extras, 18-in. 5 butts to 2-in.	3 55
Red Cedar Eurekas, 18-inch 5 butts to 2-in.	4 25
Red Cedar Perfection, 5 butts to 2 1/4	4 30
Washington 16-in. 5 butts to 2-in. extra red clear	3 50 3 80

The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/30-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2 c. per ft.; 1/4-in. 3-ply maple, sanded one side 4 c. per ft. All F.O.B. Jamestown, New York.



Yes Sir! Cling-Surface is unequalled for rope treatment. Here is proof.

These illustrations show two ropes in the plant of the Crystal Ice & Storage Co., Buffalo, N.Y., that have been typically benefitted by Cling-Surface treatment. Ernest J. Lancey, Chief Engineer, has this to say:

"Cling-Surface has done these ropes much good by not only preventing slip with less tension, but by keeping them pliable, waterproof, and keeping all the fibres lubricated, which reduces the internal friction and outside wear. We recently installed a new rope, and intend to start right with Cling-Surface. We get best results applying the Cling-Surface

as the rope enters the sheave on the tension carriage."

Cling-Surface is of as great value for ropes as it is for belts. It acts for ropes much as it does for a porous belt, gradually penetrates all through, keeping the whole rope pliable and in best physical condition. Cling-Surface makes each fiber slide smoothly against its neighbors, which is better than the dry internal grinding and chafing that occurs without Cling-Surface treatment and is so destructive.

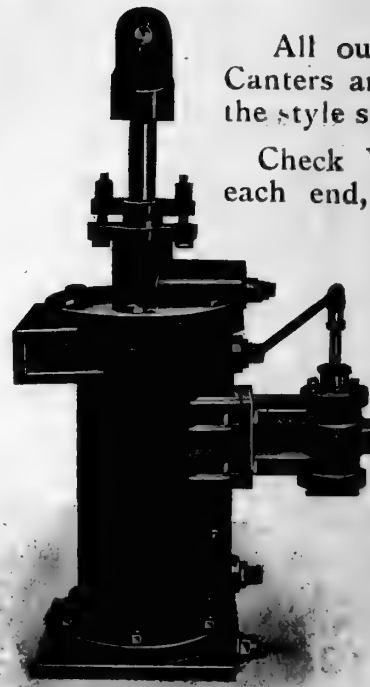
If you have a difficult drive on which other methods of preventing slip have failed and on which you would like to try Cling-Surface, let us know. Write today and get details. We will be glad to quote f.o.b. Toronto.



Cling-Surface Co

1021 Niagara St Buffalo N Y
New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 68

Log-Handling Machinery



All our Loaders, Kickers and Canters are made with cylinders of the style shown in the cut.

Check Valves are provided in each end, and all piping between valve and cylinder is eliminated. These cylinders are extra heavy and very durable, and are absolutely guaranteed by us.

We carry in stock at all times a complete line of Log Deck Machinery—so we can always serve you promptly.

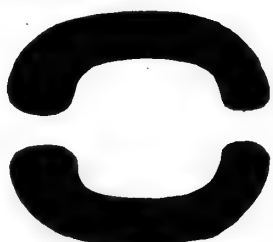
Shall we send our Catalogue?

William Hamilton Company

Peterborough - Ontario

"AJAX" Loading Chain

WELD:



Sectional view showing comparative size of weld and chain.

Experience has taught us that a good chain cannot be made from cheap material. In Ajax chains you get the best steel obtainable and every weld guaranteed. Ajax chain is guaranteed to pull stiff before breaking.

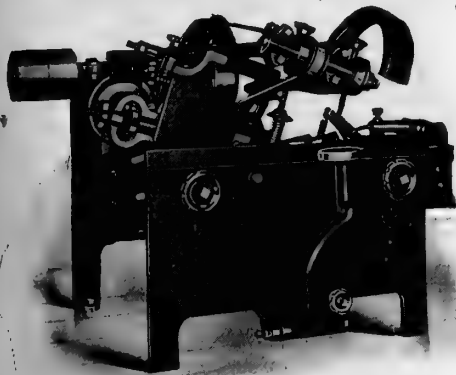
MANUFACTURED ONLY BY

Standard Chain Company, Pittsburgh, Pa.

MONTREAL—Alexander Gibb, St. Nicholas Bldg.

VANCOUVER—John Burns, 329 Railway St.

WINNIPEG—Bissett & Loucks

Band Resaws Are Accurately Sharpened

on this automatic machine. It will lower your filing room expense and keep your saws in perfect working order at all times.

It is simple in construction, easy to operate, and the price extremely low.

Write for full information

SAMUEL C. ROGERS & CO. 18 LOCK ST. BUFFALO, N. Y.

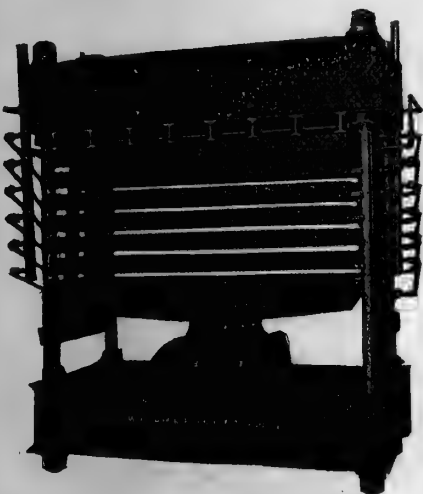
DIXON'S GRAPHITE WIRE ROPE GREASE

This mixture of Dixon's fine flake graphite with a heavy bodied mineral grease, accomplishes two very valuable objects. The grease and graphite penetrate throughout the rope or cable, coating each individual strand with pure graphite and giving perfect lubrication both internal and external, so that the rope lasts longer. And this graphite coating is a positive protection against rust and corrosion. It cannot wash off. Send for "Wire Rope Lubrication," No. 238.

Made in JERSEY CITY, N. J. by the

Joseph Dixon Crucible Company

Established 1827

**Veneer Press and Dryer**

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

WRITE FOR PRICES AND QUOTATIONS

William R. Perrin and Company, Ltd.
TORONTO, CANADA

WIRE and WIRE PRODUCTS for Lumber Shippers, Pulp Mills, Shook Mills, etc.

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooerage.

The Laidlaw Bale-Tie Co., Limited

Winnipeg
Harry F. Moulden & Son

HAMILTON,
ONARIO

Vancouver
George W. Laidlaw



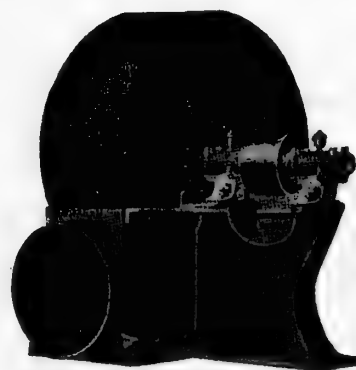
Patented Nov. 29-1892
July 19-1910

PERFECT GROOVES

Any width, with or across grain. Rapid, no screw adjustment. Guaranteed to give satisfaction on all classes of work.

Huther Bros. Dado Head can be used on any circular saw mandrel and is adjusted in the time it takes to remove a saw. Sent on approval. Write for complete description and catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc., 1103 University Ave. ROCHESTER, N. Y.

**WHY you should install the Mahony Blower****System in your Planing Mill**

Fifty per cent. higher efficiency than any other on the market to-day, uses 1/2 less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

A. Mahony, 512 Wellington West, Toronto

?

Have You an Invention

If so, we can help you to obtain every dollar of its worth.

We possess the expert drafting and mechanical ability; the essential machine shop and equipment for developing practical models; the necessary knowledge for the proper investigation of patent records, etc., and the procedure on obtaining patents that will give you absolute protection.

We obtain and sell patents in every country. Write us for any information you desire.

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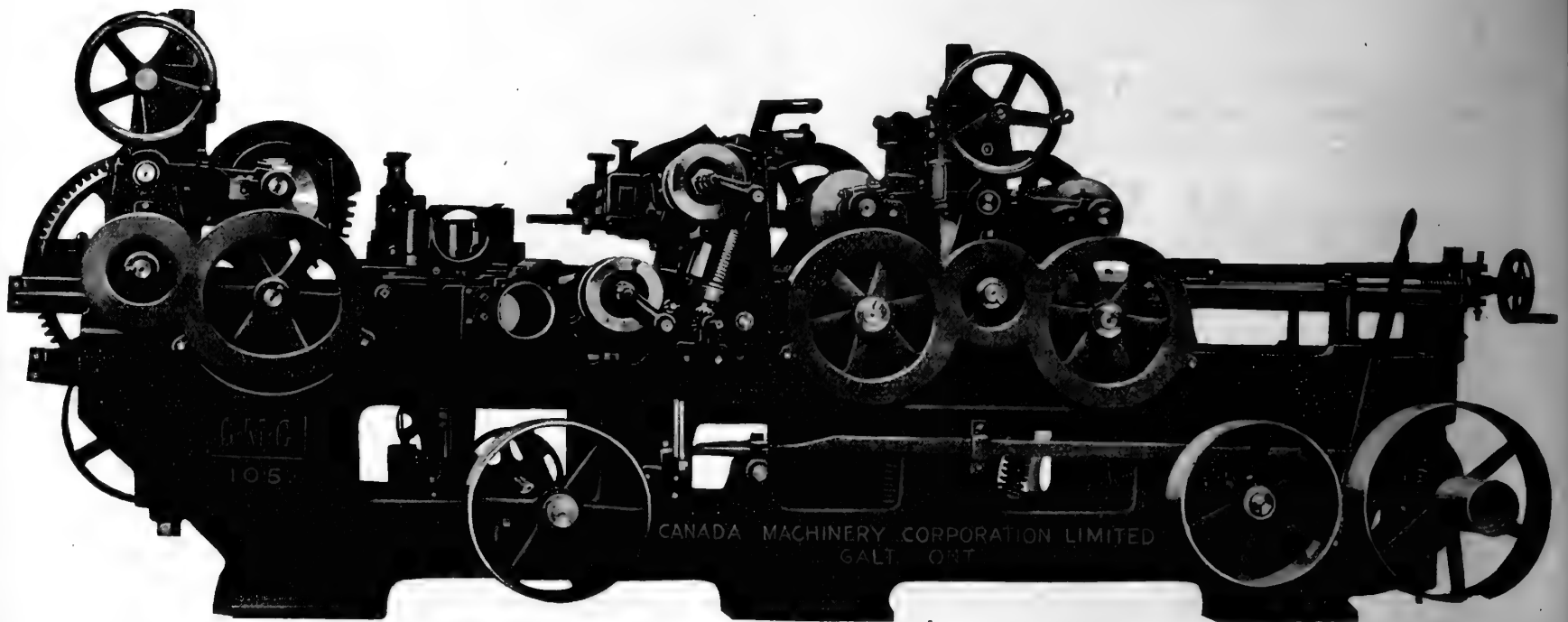
Patent Office, Suite 301-302, 22 College St., Toronto

Factory & Workshops, 206 Simcoe St., Toronto

PLANER &



MATCHER



15" Double Cylinder Planer and Matcher

Our No. 105 machine is a general purpose, medium heavy machine, especially suited for the general planing mill.

The feed range is from 45 to 100 feet per minute. Planes and matches 15" wide by 6" thick.

Full details and description contained in bulletin No. 105, sent on request.

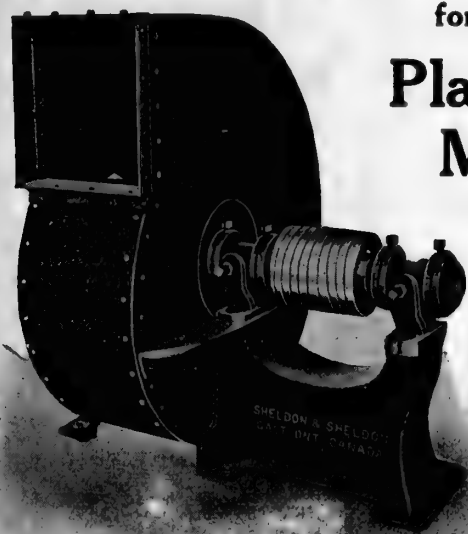
Canada Machinery Corporation, Limited

Galt - Ontario

Largest Builders of Woodworking Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

Messrs. Ross & Greig, 412 St. James St.
Montreal, Que.

Messrs. Walker's Limited, 259 Stanley St.
Winnipeg, Man.

Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

JUST WHAT THE NAME IMPLIES —taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbings (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."

Wickes Brothers

410 White Building - SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

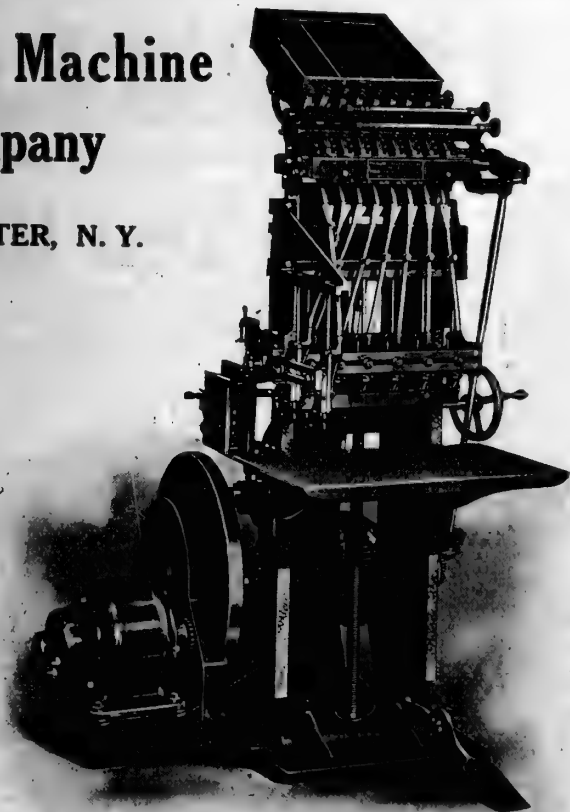
Manufacturers
of—

Nailing
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Box Board
Matchers,

Box Board
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Machines.

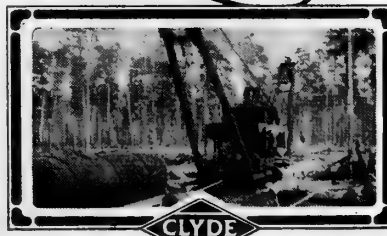


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



HORSELESS SKIDDING



Skidding with mechanical rehaults to return lines to the woods is becoming more and more popular. Greater speed and independence from weather conditions constitute the principal reasons for this :-

YOU WILL BE INTERESTED IN HEARING & SEEING WHAT OTHERS ARE DOING WITH CLYDE MECHANICAL REHAUL SKIDDERS. Write us and we will arrange to Show you

CLYDE IRON WORKS
DULUTH, U. S. A.





Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

Size "S" Single Mill with 16-foot Carriage

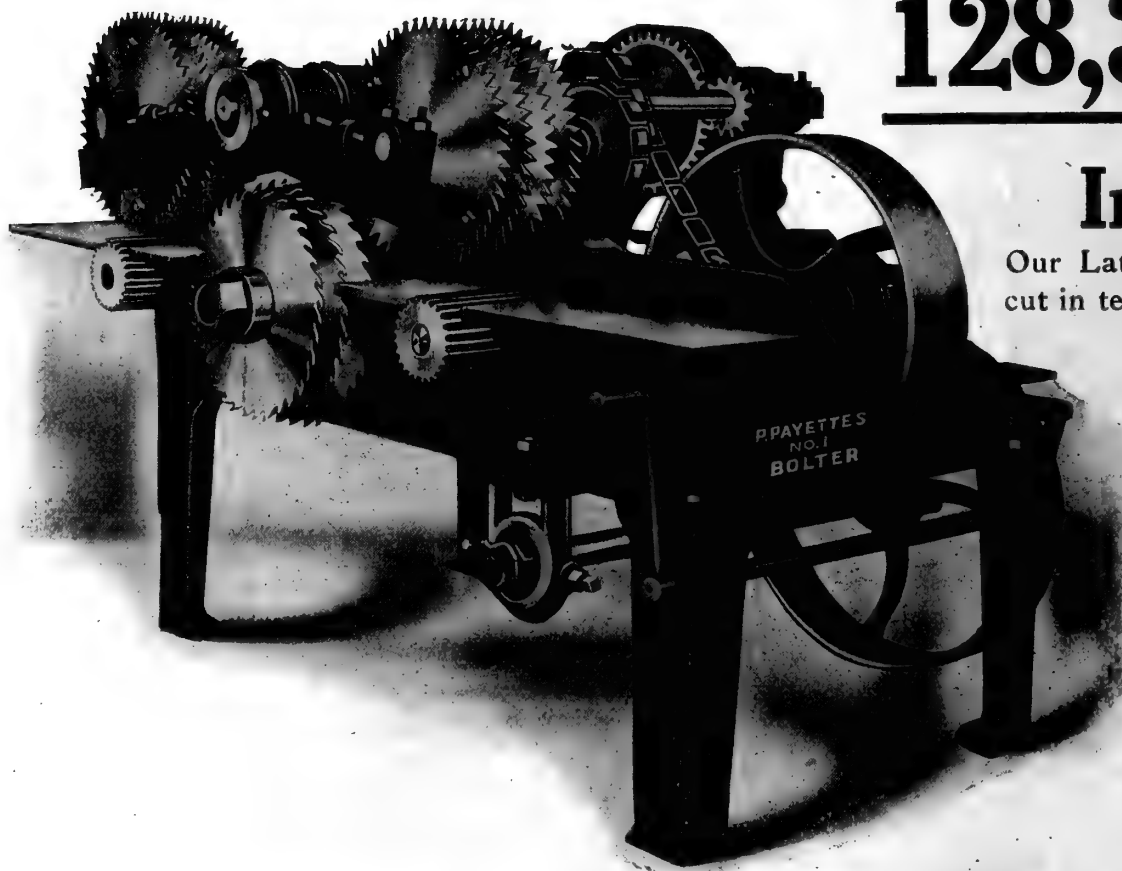
Size Husk ... 3 feet by 6 feet 3 inches
Diameter and Length Mandrel ... 2 3/16 by 55 inches
Size Drive Pulley ... 20 by 10 inches
Feed per Revolution of Saw ... 0 to 3 1/4 inches
Feed Belt ... 4-inch Gandy
Largest Diameter Saw ... 56 inches
Length of Carriages ... 12, 16, 20 or 24 feet

Width of Carriages ... 33 inches
Trucks ... 7-inch wheels and 1 1/4-inch axles
Length Track ... 32, 40, 48 or 56 feet
Style and Opening of Blocks ... C1-36 inches
Style Mill Dogs ... Pony Excelsior
Style Set Works ... No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C.. E. Long Mfg. Co., Orillia, Ont.



128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1 1/2 in. by 3/8 in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.

A Few of the "400" who use Payette's Lath-Machinery:

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
O. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.

P. Payette & Company,

Engineers and Machinists

PENETANGUISHENE, ONT.

Berlin Matcher Success has been Earned

Berlin Matchers have proven absolutely successful during the past year.

By "successful" we mean that our every claim as to their efficiency, producing ability, quality of lumber manufactured and low up keep cost in operation, has been substantiated with every installation of a Berlin Matcher

More is expected of a Berlin Matcher than any other because Berlin Matchers have always been successful. And Berlin Matchers have always given more than was expected because they are Berlin Matchers.

And this success did not just happen. It was earned by the combined efforts of the most able Berlin Engineers.

Their supreme efforts have been centered upon the one object sought; the pre-eminence of Berlin Matchers as producers of finished lumber,

That necessitates the possession of features or qualities of acknowledged superiority.

Superior design of working features, of supports for those features and of auxiliaries for their immediate assistance in producing perfectly manufactured lumber, possessed by Berlin Matchers has assured their pre-eminence.

And this has all been earned by diligent, consistent and persistent effort to supply our patrons with the best Matchers that engineering ability, plus the experience of practical mill men, carefully applied, could produce.

It is the result of attempts, year after year, to perfect a machine that would manufacture the finest lumber at a cost that insures a profit.

Our efforts have been crowned with success. And, it is to be your success as well as our own. For Berlin Matchers operating in your plant will assure a profit on the finished lumber they produce.

On paper we can give you only our claims,—reasons why you should, at least, investigate the ability of a Berlin Matcher to finish your lumber at a lower cost than you are now manufacturing it.

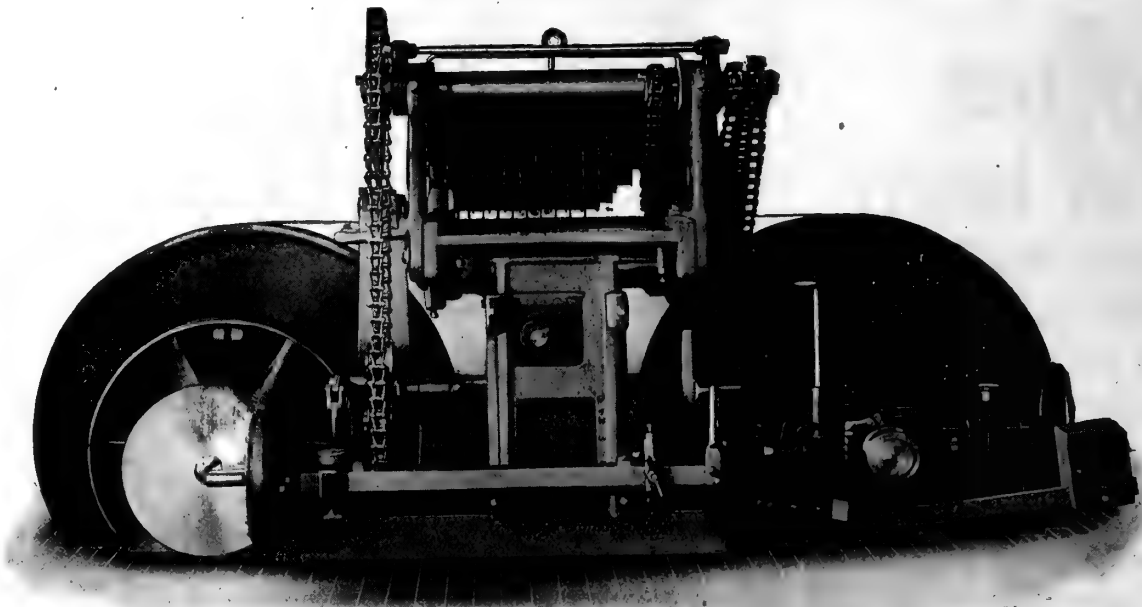
Given the opportunity we will be glad, actually to demonstrate that ability, in a Berlin Matcher.

The features that made this matcher a success are described in a circular that you may have on request.



THE BERLIN MACHINE WORKS - - Hamilton, Ont.
United States Plant - - - - - Beloit, Wis.

Horizontal Slab Re-Saw



A Horizontal Slab Re-saw will increase the capacity of a saw-mill from 15 to 25 M ft. at a less cost for equipment and a less cost for operation, than can be accomplished in any other way.

One customer in Canada has purchased 7 of our Re-saws, another 4 and another 3. Catalogue gladly furnished without obligation to you. It also illustrates many special Box Factory Machines.

The Stuart Machinery Company, Limited, Winnipeg, Man.

Agents for Saskatchewan, Alberta and Manitoba

Mereen-Johnson Machine Company, MINNEAPOLIS, MINN.
U. S. A.

KEEP THE WORK GOING



Nothing is more important in logging than the prompt and certain movement of cars.

Delays affect the whole work. To avoid delays, locomotives must be reliable and always ready for service.

Our standard logging locomotives are built to insure reliability and constant service. Only tested materials are used in their construction. All wearing parts are made to templates and gauges. Interchangeability of like parts is guaranteed, and long delays waiting for duplicate parts avoided.

MONTREAL LOCOMOTIVE WORKS, LTD.

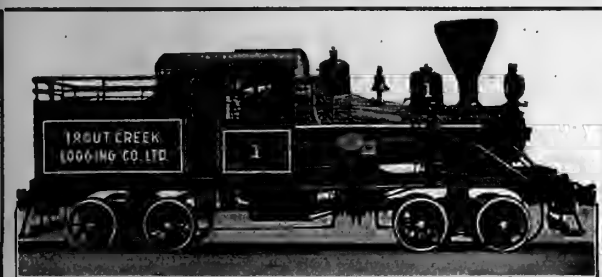
Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD. VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

Logging Locomotives

Mikado Type Locomotive, Polson Logging Co.

The Mikado is a good type for heavy hauling, where runs are fairly long and high steaming capacity is needed. The locomotive illustrated traverses 30 degree curves, and can be used on rails weighing 45-50 pounds per yard. It is simple in construction, strongly built, and rides well on uneven tracks.

When in need of a logging locomotive, consult

The Baldwin Locomotive Works

Philadelphia, Pa., U. S. A.

**Logging Locomotives**

The knowledge and experience of fifty years in locomotive designing and construction is what you get in our Logging locomotives. They are specially constructed for logging operations and will stand up to the severe service in which they are expected to run.

They are as carefully designed and built as our 200 ton locomotives. Repair parts may always be obtained on the shortest notice.

May we send you specifications

Canadian Locomotive Company, Limited, Kingston, Ont.
Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

There's a Reason

why our

"SUPERIOR" LATH MACHINE

gives such general satisfaction.

At your request we will mail list of users, testimonial sheet and descriptive circular.

You realize, of course, the advantage of installing a well-built, reliable Lath Machine if you intend sawing lath at a profit. We feel confident that should you put in our Lath Machine you will admit that we were quite right in naming it the "SUPERIOR."

The Smith Foundry Co., Ltd.

Successors to McFarlane, Thompson & Anderson

Fredericton, N. B.

The Old Town "Canvas" Canoe

A Friend in Need is a Friend Indeed



DISTRIBUTORS:

Henry Morgan & Co.,
Montreal, Que.
Holt Renfrew & Co.,
Quebec, Que.
Hudsons Bay Company—
Their various branches.
F. A. Kirkpatrick,
81 Summer St.,
St. John, N.B.
Grant-Holden-Graham, Ltd.,
Ottawa, Ont.
The T. Eaton Co., Ltd.,
Toronto, Ont.
Northern Canada Supply Co.,
Cobalt, Ont.
Cochrane Hardware Ltd.,
Sault Ste. Marie,
Sudbury,
North Bay, Ont.
J. Darch & Sons,
London, Ont.
Rice Lewis & Son,
Toronto, Ont.

Agents wanted in unoccupied territory.

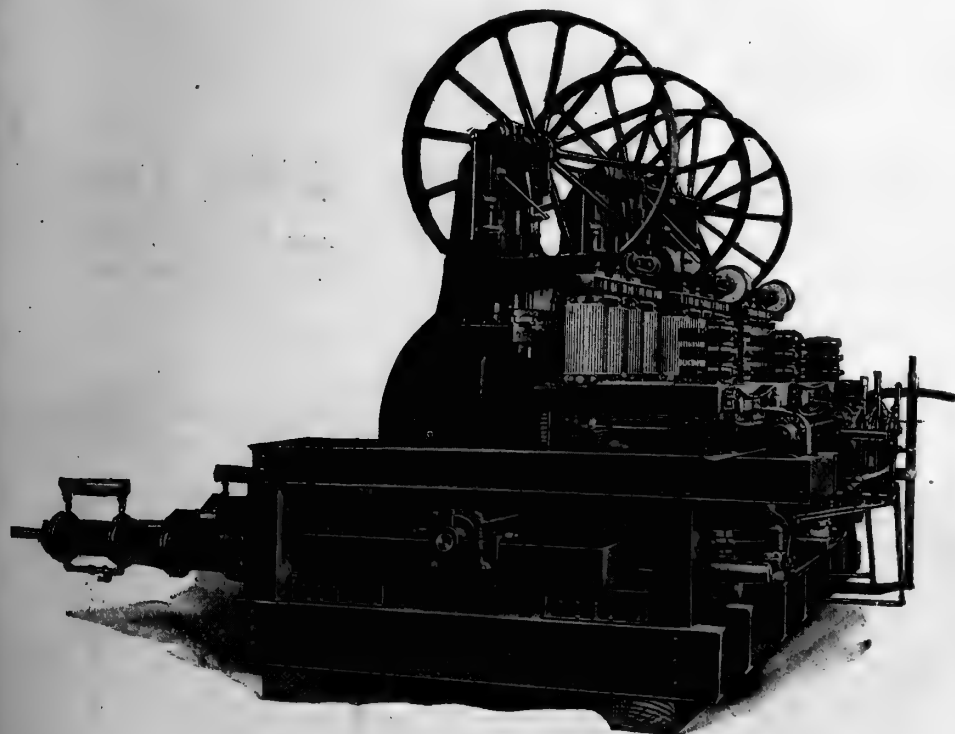
Photo taken by employee of Laurentide Co. Ltd., Grand Mere, P. Q. Their Supt., Forestry Division, states canoe damaged in Rapids, canvas held, braced up canoe and continued journey down St. Maurice River 70 miles. Used canoe balance of season and all following year.

F. M. DIXON

Canadian Representative: Beardmore Bldg., MONTREAL

Built to Supply an Insistent Demand--

Especially on the Pacific Coast



Heavy Sawmill Band Resaw Gang

Comprising a group of from three to five Band Mills, feeding from 100 to 200 lineal feet per minute, the capacity is unlimited.

Provision for instantly changing the position of the saws being provided, it is possible to saw any desired thickness.

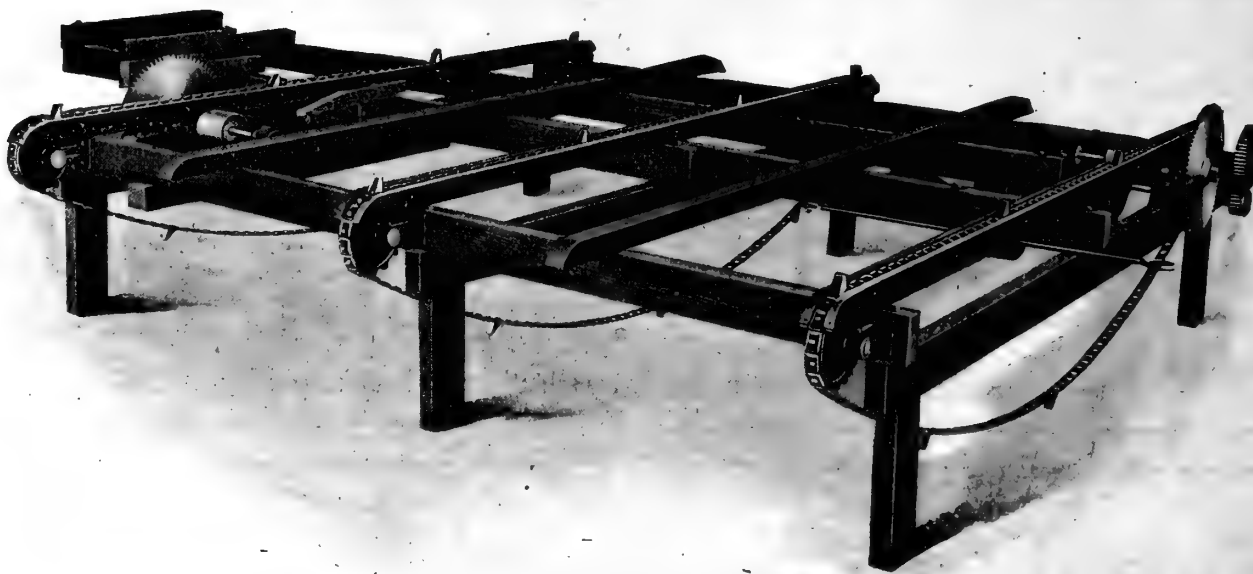
Adopted by such firms as the C. A. Smith Lumber Company, San Francisco, California, and Marshfield, Oregon, Hammond Lumber Co., Astoria, Oregon, and Donald Fraser and Sons, Ltd. See article in this issue. Its practicability and efficiency is unequalled.

Write for particulars, also Sawmill Section of Band Resaw catalogue.

Wm. B. Mershon & Co., Saginaw, Mich.

The Mark*of Quality*

SMALL MILLS THAT MAKE GOOD



Individual machines
or complete plants
furnished, to meet
the special needs of
any locality.

No. 1 Two-Saw Trimmer.

*A Post Card will bring you complete information on
any saw mill machine. Send it. It's worth while.*

The E. Long Manufacturing Co., Limited, Orillia, Canada

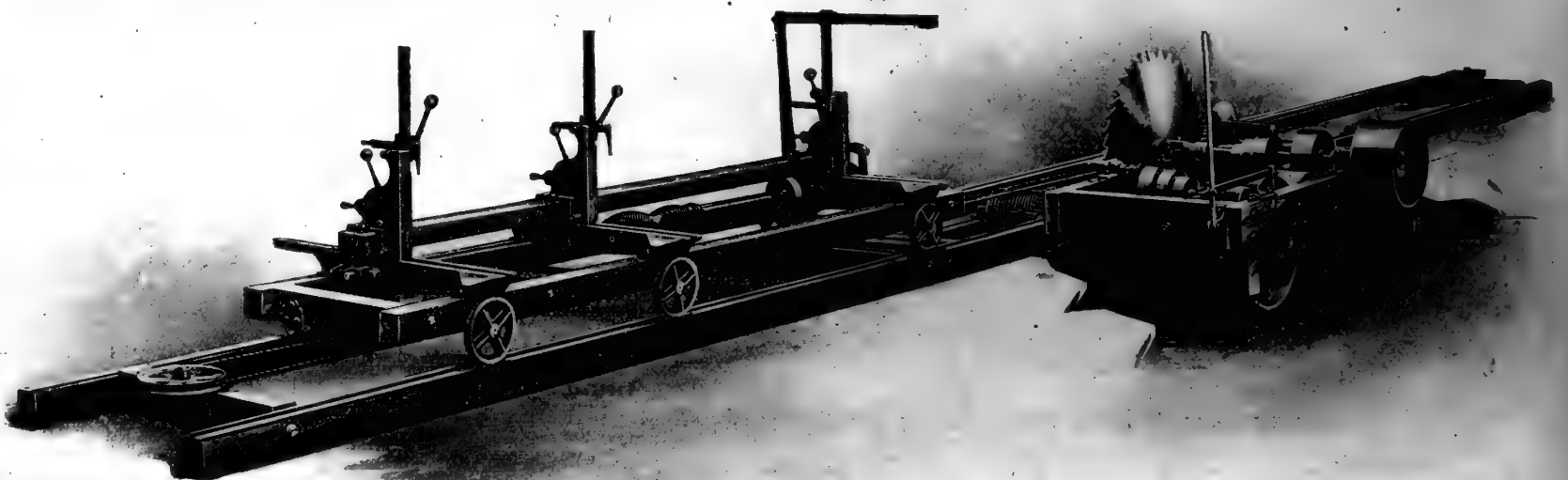
Robt. Hamilton & Co., Vancouver

Represented by:

Gorman, Clancey & Grindley, Limited, Calgary and Edmonton

Stuart Machinery Co., Ltd., Winnipeg

Williams & Wilson Ltd., Montreal



See Advertisement on page 67

Wayagamack Pulp and Paper Co., Three Rivers, P. Q.

Louisville Lumber Mills, Louisville, Que.

Dominion Mahogany and Veneer Co., Montreal West, Que.

Riordon Pulp and Paper Co., Calumet, Que.

Shephard and Morse, Ottawa, Ont.

J. R. Booth Mills, Ottawa, Ont.



Mills Like These Are Using— **WATEROUS MACHINERY**

Your will find Waterous Equipment in those Canadian Mills where fast and accurate cutting are essentials.

Waterous Sawmill Machinery is being used because it is built for that kind of work,—it is the result of more than 50 years' intimate knowledge of Canadian sawmilling conditions.—The men who use Waterous machinery know that it will give the service they expect.

Our reputation for "knowing how" is a guarantee that every piece of equipment you buy from our shops is the last word as regards Sawmill machinery. You can bank on the results it will give you.

There is a Waterous equipped mill in your neighborhood—we will be glad to tell you where. Watch our machines at work and ask the operator and the owners what they think of them—we will abide by what they tell you.

The Waterous Engine Works Co. Limited

Brantford, Canada

Vancouver, B. C.

Winnipeg, Man.

Everything for the Sawmill

Log Jacks
Log Deck Equipment
Sawmill Carriages
Carriage Dogs
Set Works
Steam Set Works
Friction Receders
Steam Feeds
Friction Feeds
Twin Engine Feeds
Live Rolls and Drives
Transfers and Transmissions
Refuse Conveyors
Band Mills—6', 7', 8', 9', and 10'.
Double Cutting Saw Guides
Circular Sawmills
Edgers—all sizes
Filing Room Tools
Lath Mills and Bolters
Log Chains
Log Slashers
Planers
Sawmill Engines
Power Plants Complete
Boilers—all kinds
Refuse Burners

Catalogues on request



"FROST KING" METAL

\$5,000,000.00

worth of mixed metal
sold annually.

Our thirty five years experience in metal mixing enables us to place on the market a babbit that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:—

New York, N. Y.

London, Eng.

St. Louis, Mo.

BATTS LIMITED

WEST TORONTO

MANUFACTURERS OF

Staved Columns
Veneered Doors
Newel Posts
Sashes - Flooring
Trim
Pine Doors and
Frames
Turned Newel Posts and
Balusters
Cypress Greenhouse
Material

BATTS LIMITED

MANUFACTURERS

WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
KNOWN
OUR
"EXTRA"



MONTREAL
WINNIPEG

TORONTO
VANCOUVER

The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL

Slow Speed — Low Power Exhaust Systems

For removing Shavings, Sawdust, Emery Dust, Lint Smoke and Odors

Is your Blower System satisfactory? — If not, we can make it so
What We Have Done For Others, We Can Do For You



Our System recently Installed in Largest Box Shook Factory in Ontario.

TORONTO BLOWER CO., Toronto, Ont.

Canada Lumberman

Time is Money

The rapid cutting File is the economical File

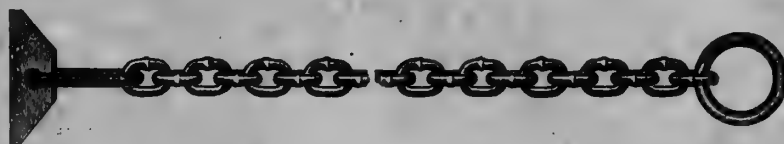
Files Branded

American - Arcade - Eagle - Great Western
Globe - Kearney & Foot - McClellan - J. B. Smith

are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



Electric-Welded Boom Chain

25% {More Weld} = 25% {More Strength} = 25% {More Wear}

Sheared Toggle and Ring * T Bar Hook and Link * Two Sheared Toggles * Forged Toggle and Ring

Made in Canada

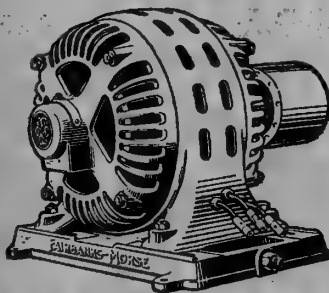
Write to

Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

Something Better in Induction Motors

Rotors with "cast-on" end ring construction as originated for and applied to Fairbanks-Morse Induction Motors have revolutionized motor construction.



They will *Pull* and *Keep on Pulling* while weaker motors are in the repair shop, having their joints fixed, or their insulation patched.

*They are efficient and economical.
Write now for Bulletin 202H.*

The Canadian Fairbanks-Morse Co.
Limited

Montreal, St. John, Quebec, Ottawa, Toronto, Hamilton, Ft. William, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Vancouver, Victoria.

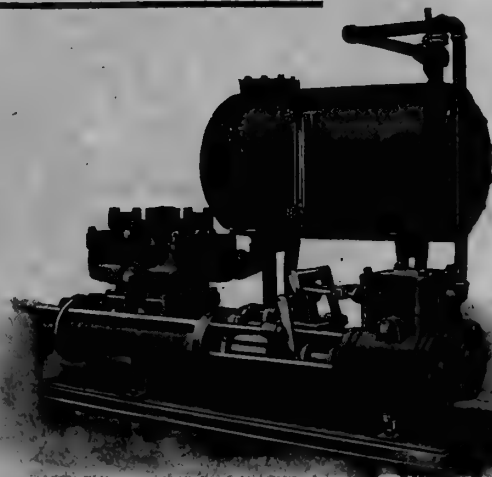


THE BELT YOU WILL EVENTUALLY USE

BECAUSE—It withstands heat, cold, damp, wet and chemical fumes.
BECAUSE—It is uniform in thickness and runs true.
BECAUSE—Of its great strength, almost twice that of oak-tanned double leather.
BECAUSE—It costs no more, all things considered.

F. REDDAWAY AND COMPANY
Sole Makers **MONTREAL**

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER



BLOT out your troubles and buy your pumps from us. We stand behind them.

The Smart-Turner Machine Co.,
Limited
Hamilton,
Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless Steel Chain"

Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

..

..

MONTREAL

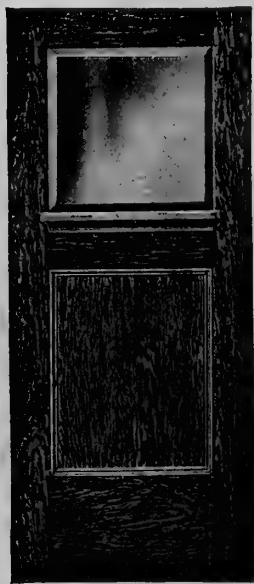
Midland Planing Mill Products

THE LEADING STOCK LINES

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition? The up-to-date dealer who carries a stock of Hardwood Veneered Front Doors, wants the widest possible range of designs, but is always hampered for room.

Here are three designs of Veneered Doors and four designs of Midland Interchangeable Sash.



Door No. 612



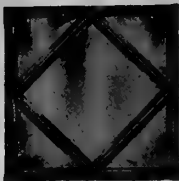
Sash A



Door No. 79



Sash C



Sash B



Sash D



Door No. 81

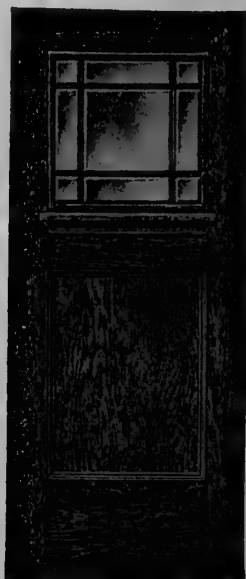
These doors and sash are all you require to carry. Each door will make up into five different designs. The sash are easily fitted, just as easy as a pane of glass, and are **interchangeable**. The same piece will fit each of the different designs. You will require additional sets for each additional sized door you carry in stock.

See our new door catalogue "Midland Doors" for full information and prices.

→
And
this
is
what
they
look
like.
→



Door No. 613



Door No. 615



Door No. 82



Door No. 83

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition?

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company
Limited
CACHE BAY - - ONTARIO

Manufacturers of

**Lumber, Lath and
Dimension Timber
Planing Mill
Dry Kiln**

See Us First

Now that spring has arrived, do not forget when buying, that we have
a full assortment of

White Pine, Norway & Spruce

JAMES G. CANE & CO.

411 McKinnon Building, TORONTO, Ont.

Yellow Pine Timber

And Lumber Rough or Dressed
Car Material and Long Timbers
a Specialty

PROMPT SHIPMENTS

E. C. BRADLEY LUMBER CO.

Lisman,
Ala.

and

Cincinnati,
Ohio

New Ontario Colonization Co.

LIMITED

Lands, Lumber, Lath and Pulpwood
Planing Mill Work

Clay Belt Lands for Sale

Located in

Townships of Kendry and Haggart, District of Temiskaming, Ontario

We have the following on hand ready for shipment:

1 x 4	Merchantable Spruce
1 x 5	" "
1 x 6	" "
1 x 7	" "
1 x 8	" "
1 x 9	" "
1 x 10	" "
1 x 12	" "
2 x 4	" "
4/4 and 8/4	Mill Run Tamarack
4/4	Balsam
4/4	No. 2 and Better Whitewood
8/4	No. 2 and Better Whitewood
4/4	Mill Run Poplar

Mills:

JACKSONBORO, ONT.

Sales Office:

New York Telephone Bldg.
BUFFALO, N. Y.

T. H. Garrett Lumber Co.

Manufacturers of **YELLOW PINE LUMBER**

Mills:—

Selma, La.
Jena, La.
Melton, La.
Waukegan, Tex.
Buena Vista, Ark.

Long Leaf Timbers,
Short Leaf Finish
and
Railroad Material

Send your inquiries and orders to:—

General Sales Office

Suite, 1220 Chemical Building, ST. LOUIS, Mo.



Spruce
White Pine
Banksian Pine
Birch



Get our stock list and prices.

QUEBEC & ST. MAURICE INDUSTRIAL COMPANY,

Portland, Maine

Dry Stock at Tomiko Must be Shipped at Once Write for Prices

100 M' 1 x 4 & 5—10/16 Mill Run White Pine
 100 M' 1 x 6—10/16 " " " "
 50 M' 1 x 7, 9, 10—10/16 " " "
 88 M' 1 x 10 No. 1 Culls
 130 M' 1 x 12 No. 1 Culls
 100 M. 1 x 4 & up "

The Long Lumber Co.
 Hamilton, Ont.

LOOK

at the name

Hocken

and remember it when you want
good

Hemlock Dressed and Sized or Bill Stuff

You'll get the best and
get it promptly

Hocken Lumber Co.

Limited

OTTER LAKE STATION,
ONT



DRY RED PINE

3 x 11	3 x 4	2 x 6	6/4 x 4
3 x 10	3' Shorts	6/4 x 11	5/4 x 9
3 x 9	2 1/2 x 9	6/4 x 6	1 x 6
3 x 5	2 x 8	6/4 x 5	

4/4 to 8/4 Clear and Clear Face.

Watson & Todd, Ltd., Ottawa, Ont.

Wholesale Lumber

Car and Cargo Shipments

JOHN M. DIVER

DETROIT, MICH.

"Everything in Lumber"

Large Stocks of Sized or Rough Hemlock and Yellow Pine, in the Rough

Cedar Telegraph and Electric Railway Poles 20 to 80 ft.

Write for prices

Timber for R. R. Construction and Commercial Purposes, a Specialty.

OFFICE:—413 Hammond Bldg.
Phone Cadillac 2275

The Georgian Bay Lumber Co.

Limited

Waubashene, Ontario

Manufacturers of High Grade

Lumber and Laths

Fraser Bryson Lumber Co., Ltd.

Wholesale Lumber Dealers

Selling agents for Fraser & Co., Manufacturers

Mills at Deschenes, Que., near Ottawa

White Pine Red Pine Spruce Lumber and Lath

Office, Castle Building
53 Queen St. Ottawa, Can.

JOHN GILLIES
President

DAVID GILLIES
Vice-President.

J. S. GILLIES
Sec.-Treas.

Established
1873

GILLIES BROS.

Limited

Manufacturers of

WHITE PINE

RED PINE

SPRUCE

New York City: Guy E. Robinson, 1123 Broadway

Mills and Head Office
BRAESIDE, ONT.

Quebec

Spruce and Hemlock

Lumber

***Cedar Shingles
Lath***

BARTRAM BROTHERS

Limited

Ed. T. Saxe, 200 Claremont Ave., MONTCLAIR, N.J.

Hope Chambers, OTTAWA, CAN., Head Office

Bromley can submit attractive prices.

Real choice red and white pine stock.

Odd lots go at bargain prices.

Mississauga reserve timber—my stock.

Largest orders filled promptly.

Every board carefully graded.

You should get my wholesale prices.

**William
H.
Bromley
Pembroke
Ontario
Canada**

Quincy Adams Lumber Co., Limited

MANUFACTURERS AND WHOLESALEERS OF

White Pine, Birch, Spruce and Hemlock

Special Price for quick shipment:

4/4 No. 1 Common Birch, Dry.
5/4 1sts and 2nds Birch, Dry.
8/4 - 10/4 - 12/14 No. 1 Com. and Bet. Birch.
1 x 10 - 10/16 Com. and Drsg. W. Pine.
1 x 5 Merchantable Spruce, Dry.
2 x 5 and 2 x 6 Merchantable Spruce, Dry.
4 x 4 Merchantable Spruce, Dry.
6 x 6 to 12 x 12 Merchantable Spruce, Dry.

Toronto, Canada

801-2 C.P.R. Building,
Cor. King & Yonge

The Rideau Lumber Co., Limited
Trafalgar Building, Ottawa, Ont.

1913 Sawing

SPRUCE

Dry Factory White Pine—All thicknesses.

Dry—3 x 7 and up White Pine Mill Culls.

I WANT YOUR ORDERS

and solicit your inquiries for

**PINE, SPRUCE, HEMLOCK,
HARDWOODS, LATH**

Deal with me and you will be satisfied every time.

C. A. SPENCER

*Wholesale Dealer in Rough and
Dressed Lumber, Lath
and Shingles*

Eastern Townships Bank Building, MONTREAL, Quebec

THE
FESSERTON TIMBER CO.
LIMITED

Manufacturers of

Pine, Hemlock, Spruce & Hardwoods

WE CAN

Dress, Match, Size and Resaw
at Fesserton

**Hemlock and Pine Timbers
a Specialty**

15 Toronto Street, TORONTO

Casey-Shaw Lumber Co.
Limited

SUDBURY, ONT.

Manufacturers of

Lumber and Lath,

Planing Mill Work

General Office, Sudbury, Ont.

Our Mills Produce and We Market as Much
GENUINE LOUISIANA RED CYPRESS
As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

Hibernia Building

New Orleans, La.



MARITIME PROVINCES

Fraser Limited

Fredericton, N. B.

SELLING AGENTS FOR

Donald Fraser & Sons, Limited

Cabano, P. Q.

Fraser Lumber Co., Limited

Plaster Rock, N. B.

F & M Lumber Co., Limited

Whitworth, P. Q.

MANUFACTURERS OF

Spruce Lumber

Rough and Finished

**Shingles, Lath, Piano
Sounding Board Stock, etc.**

J. B. SNOWBALL CO., LTD.

Chatham, New Brunswick, Canada



View of yard and mill—J. B. Snowball Co., Ltd., Chatham, N.B.

—Manufacturers of—

**Spruce, Pine, Hemlock, Hardwood, Lumber,
Cedar Shingles and Laths**

Mills—Chatham, Tracadie, Millerton.

We solicit your enquiries.

We invite correspondence re
“Dalhousie” Brand
N. B. Cedar Shingles *of all grades*
Special Prices for shipment to
All Ontario Points

Dalhousie Lumber Co., Limited

Dalhousie, New Brunswick

Agents for Ontario

R. Laidlaw Lumber Co., Limited
Toronto

Edward Partington Pulp and Paper Co., Limited

Head Office, St. John, N.B.

Mills: St. John, N.B.

Blackville, N.B.

Marysville, N.B.

Manufacturers of

**Bleached
Sulphite Pulp**

Spruce, Pine and Hemlock Lumber, Laths

Hardwoods

If You Need a Position

a classified advertisement in the **Canada Lumberman and Woodworker** will find one for you.

If You are a Capable Man

no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.

The rates are most reasonable, write us.

Canada Lumberman and Woodworker, Toronto

JOHN McKERGOW, W. K. GRAFFTEY,
President Managing-Director

**The Montreal Lumber
Co. Limited**

Wholesale Lumber

Ottawa Office: Montreal Office:
46 Elgin St. 759 Notre Dame St., W.

**WHOLESALE DEALERS
SPRUCE**

13 Foot and 16 Foot

**Lath and
White Cedar Shingles**

CHRISTY-MOIR CO.
149 Broadway, New York City

JOHN P. NEWMAN

Saw Mill and Novelty Works. All
kinds of Hard and Softwood Lumber.
Dimension Stock in Beech, Maple and
Birch. Mattress and Cot Frames, Etc.
*Send me your requirements, I can furnish
you stock that will please.*

PHONE 37 RESIDENCE 15
WIARTON, Ont.

HAEBERLE LUMBER CO.
LUMBER AND TIMBER

White Pine, Norway Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and
Blinds, Cedar Poles and Ties.
Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

**BAUGHMAN'S
BUYER AND SELLER**

Special Price, \$1.00

Canada Lumberman -- Toronto

Hardwood Flooring
The Celebrated Diamond Brand

End Matched, Bored,
Polished and Bundled

Manufactured by
SIEMON BROS., LTD.

For prices write

W. T. EAGEN

Selling Agent for Ontario and Quebec

2 Toronto Street,
Phone M. 2814 TORONTO

**Watchman's
Portable
CLOCKS**

We are the only MANUFACTURERS
in America

WRITE US FOR DETAILS

Hardinge Bros., Inc.
1775 Berteau Ave., CHICAGO

Lumber

**Good
Grades**

**Right
Prices**

**Prompt
Shipments**

We want to move the following stock quick, and if you are interested in any of the items, take it up with us before buying elsewhere. We will quote you prices that should get the order. We ship all Hardwood in accordance with National Hardwood Association Rules of Inspection.

10 Cars 4/4 No. 1, C. & B. BIRCH

1 " 6/4 No. 1 " "

4 " 8/4 No. 1 " "

3 " 16/4 1st and 2nd "

15 M ft. 8/4 No. 1, C. & B. S. ELM

1 M ft. 12/4 No. 1 " "

6 M ft. 16/4 No. 1 " "

7 M ft. 6/4 No. 2 " BEECH

1 1/2 M ft. 5/4 No. 2 " "

3 M ft. 10/4 No. 1 " "

7 M ft. 12/4 No. 2 " "

Ask About Car 10/4 to 16/4 BIRCH

FULL LINE OF JACK PINE

Above stock dry and well manufactured

**C. G. Anderson Lumber
Company, Limited**

Manufacturers and Strictly Wholesale
Dealers in Lumber

**206 Manning Chambers
Toronto**

WE Buy, Sell and deal in all kinds
of Lumber and Timber in Can-
ada and United States: Spruce,
White Pine, White and Basswood, Ash,
Cedar, Douglas Fir, Beech, Birch, Wal-
nut, Cherry, Chestnut, Cottonwood,
Hemlock, Maple, Norway Pine, Short
and Long Leaf Yellow Pine, Oak, Red-
wood, Birch, Maple and Oak Floor-
ings, Pulpwood Ties, and Cedar Poles.

AUGER & SON
QUEBEC

**The Canada Wood
Specialty Co., Limited**

Manufacturers:

Lumber, Hardwood Flooring,
Handles, Poles, Bed Frame
Stock, Cheese Box Hoops,
Heading, Baskets, Etc.

Write, Telegraph or Telephone
your orders

Orillia, Ont.

**R. LAIDLAW
LUMBER CO.**

LIMITED

Toronto

Sarnia

Buffalo

FOR SALE

For Immediate Shipment

Hardwood Lumber

**Moulding, Sash and
Doors**

SPECIALTY: Dressing of wood
in transit on the Intercolonial
Railway.

The Rimouski Industrial Co., Ltd.
Rimouski, P.Q.

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N. Y.

Individuality and Experience Count

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Your Inquiries Will Have
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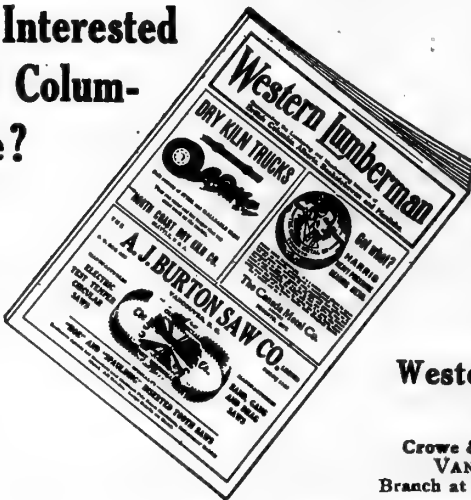
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within a few
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The Heavier it is the Better we like it

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We sell only the best that the woods can grow, manufactured by the best machines that man can make.

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Notice is given by the government of the province of Quebec that, on the 11th of August and on the 20th of October, 1914, permits to cut timber on over 8,000 square miles of crown lands will be offered at public auction.

The territory to be disposed of comprises some 1200 square miles in the basins of rivers Ottawa, Harricana and Bell, in the Abitibi region; 6,000 square miles in the lake St. John northern region; 350 square miles in the lake St. John East agency; 242 square miles in the Matapedia division.

On the first date above mentioned, permits will be offered at ordinary conditions on some 3,000 square miles.

The timber grants advertised for the 20th of October, comprising the basins of three large rivers in the lake St. John region with considerable water powers, will be subject to the obligation of manufacturing the wood into pulp or paper within the province of Quebec.

For particulars, please apply to the Department of Lands and Forests, Quebec, Canada.

Elz. Uiville Dechene

Deputy-Minister of Lands and Forests.

Quebec, April 11th, 1914.

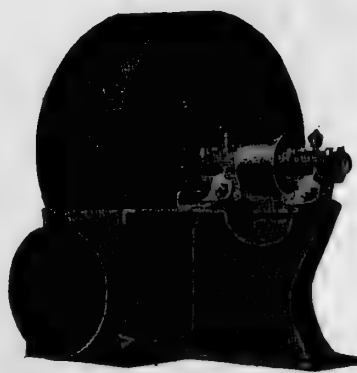
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15,000 ft. of 3" No. 1 C. & B. Maple
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Best Quality and Bone Dry

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Fifty per cent. higher efficiency than any other on the market to-day, uses ½ less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

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4, 5 and 6 inch "CLEAR A" Cedar Bevel Siding.

8, 10 and 12 inch CLEAR CEDAR FINISH.

EXTRA XXX RED CEDAR SHINGLES.

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United States Manufacturers and Wholesalers seeking Canadian Business

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK
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Specialty:

QUARTERED WHITE OAK

Service First

20,000,000 feet Dry Hardwoods for immediate
Shipment.

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- 1 car 1 x 12 in. and wider firsts and seconds Basswood.
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- 2 cars 1 x 6 in. and wider firsts and seconds Beech.
- 2 cars 1 x 6 in. and wider No. 1 Common Beech.
- 1 car 5/8 in. No. 2 Common and Better Beech.
- 2 cars 1 x 6 in. and wider No. 1 Common Birch.
- 1 car 1 x 6 in. and wider No. 2 Common Birch.
- 2 cars 8/4 No. 1 Common and Better Soft Gray Elm.
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- 16/4 firsts and seconds, 7 to 17, 1 car.
- 4/4 No. 1 common, 2 cars.
- 5/4 No. 1 common, 3 cars.
- 6/4 No. 1 common, 2 cars.

CHESTNUT

- 5/4 firsts and seconds, 1 car.
- 6/4 firsts and seconds, 2 cars.
- 8/4 firsts and seconds, 1 car.

WHITE OAK

- 5/4 firsts and seconds, 3 cars.
- 6/4 firsts and seconds, 4 cars.
- 7/4 firsts and seconds, 2 cars.
- 8/4 firsts and seconds, 1 car.
- 4/4 No. 1 common, 3 cars.
- 5/4 No. 1 common, 2 cars.
- 6/4 No. 1 common, 2 cars.
- 7/4 No. 1 common, 1 car.
- 8/4 No. 1 common, 2 cars.

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- 4/4 No. 1 common, 3 cars.
- 5/4 No. 1 common, 1 car.
- 4/4 clear face strips 3 to 5 1/2, 2 cars.

The above is a list of dry lumber which we can ship promptly.
All our own manufacture, band sawed and thoroughly seasoned.
Do not place your order before writing for prices.

Canadian Representative:

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W. H. DAWKINS LUMBER CO.

MANUFACTURERS OF BAND-SAWED

OLD-FASHIONED SOFT

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HARDWOOD LUMBER

United States Manufacturers and Wholesalers seeking Canadian Business

THE W. E. HEYSER LUMBER COMPANY

Manufacturers, Wholesalers and Exporters of High Grade

West Virginia and Southern Hardwoods

15,000,000 ft. on hand at all times of dry Plain & Quartered W. and Red Oak, Poplar, Ash, Hickory, Gum and other Hardwoods.

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Full assortment of grades and thicknesses in Quartered and Plain Oak, Gum, Poplar and other Hardwoods in our Jamestown yards.

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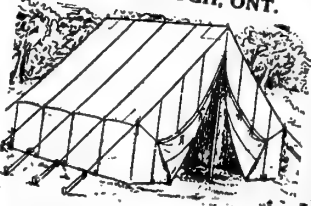
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With Molasses and Alfalfa

In Checkerboard Bags.

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Note our NET PRICES per foot on NEW RUBBER BELTING

4 ply.	5 ply.
8" at 31c	8" at 36c
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Send for our Net Price List on Belting of every description.

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Saddle Tank Locomotives Geared Locomotives Steel Rails Flat Cars

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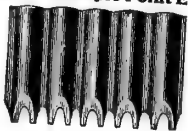
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Packed in bulk or packages.



Write for samples and prices.

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Any depth and any number of corrugations
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A complete line with several specialties for the Lumberman.

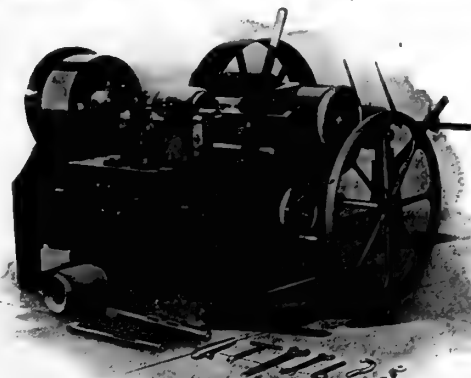
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After being bored the hub block is placed in this machine and is first roughed down to proper diameter by the roughing knife placed at the back end of the sliding carriage, after which the carriage is moved forward and the hub is turned on the finishing knives, which are held in patent stands at the front of the machine. The beads and band seats are all finished at the same time, after which the front end of the hub is cupped, and, when so ordered, this machine is also equipped with a back cupping attachment. Write for descriptive circular and price.



No. 1 Hub Lathe

The Defiance Machine Works :: Defiance, Ohio, U.S.A.



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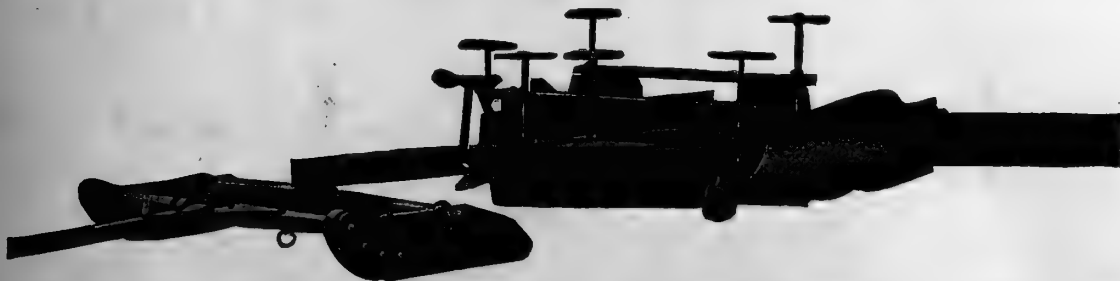
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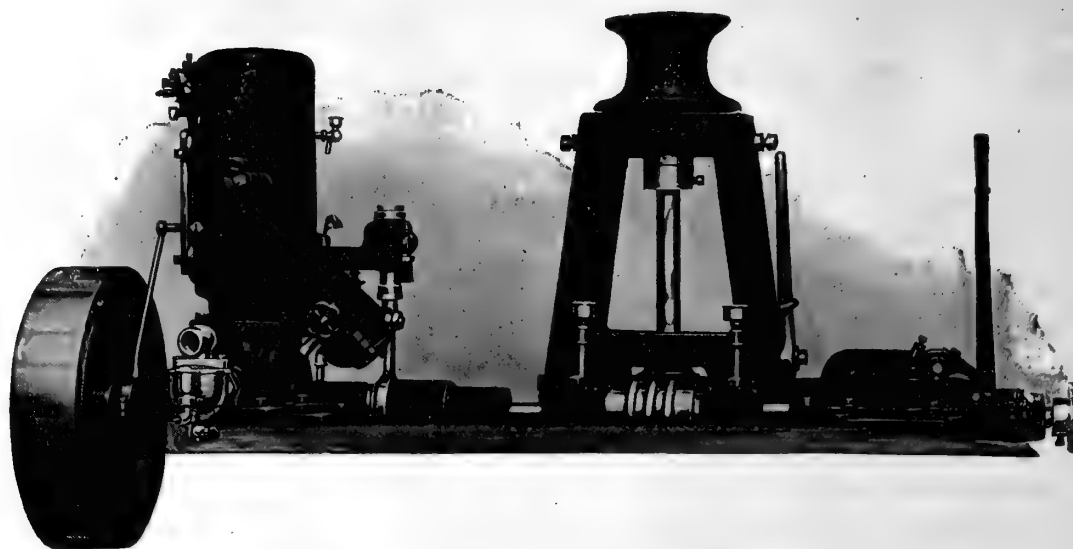
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A big advantage of the Adams Pointer is that coal-oil may be used as fuel instead of gasoline. This oil is found in every camp in the country, it is cheaper, safer and more convenient than gasoline and is just as satisfactory.

Adams Pointers reduce your river costs.

Adams Pointers do the work of from six to ten men. One man operates all machinery.

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Cant Hooks, Boom Chains, Timber Dogs

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Our products are the result of over 50 years of careful study of the lumberman's requirements and we can offer the best equipment at the lowest price.

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- | | |
|---|--|
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| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
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| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
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| 2 2-saw trimmers. | |
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, June 1, 1914

No. 11

A Time for Confidence and Courage

The continuation of a state of trade strongly marked by absence of large orders, is reported from practically all parts of Canada. The reasons for this have been discussed time and again, during the past few months, by the trade and by trade journals, and though there is a fairly general agreement as to the causes and the results, no one is inclined as yet to express a definite opinion as to how soon conditions will take a change for the better. The lumber trade is probably in a better position than most other lines of business to stand this quietness and to pass through the period of poor business. It is noticeable indeed that lumbermen, while feeling the effects of the depression are in a more hopeful frame of mind and are doing less worrying than those engaged in other industries and trades. This may be accounted for by the fact that the manufacturers of lumber particularly in Eastern Canada, did not over-produce during 1913, and that stocks of nearly every description are sufficiently low to prevent any slump in prices. The competition of stocks from the United States however, has done a great deal to unsettle price conditions, and many of the Ontario producers and handlers of lumber have been anxious about this situation for some time. While there is reason enough for them to feel anxious, and to watch carefully for any silver lining to the business clouds, or for indications of further bad weather, we believe, and many of the best informed members of the trade are of the same opinion, that there is no necessity to-day, and probably will be none before more active trade develops, for giving away stocks at prices which afford no profit. In the face of strong competition and a declining demand for stocks, lumber prices were maintained remarkably well during the past winter and during most of last summer. There is no reason at present to fear that they will not continue to hold until the period of depression is past.

Although large orders for lumber stocks have become very scarce,

the present conditions have been in force so long that they are getting down almost to what may be considered a normal basis during quiet times. In Canada, probably more than in any other country in the world, a great deal of steady expansion is in progress. The speculative expansion which inflated business conditions so seriously for a few years, until about a year ago has been entirely checked. The natural growth of the country to-day is so considerable that it causes the consumption of a sufficient quantity of lumber to constitute a fairly active trade. That this is the case, is not admitted by everybody, but good evidence in regard to it is afforded by the number of lumbermen who report that they are quite busy. Some even, have reported increased sales as compared with the early part of last year. If manufacturers and dealers in lumber can continue the policy of patient waiting which they have been practicing, the trade will probably come through the dull period in good shape and be in a position to take good care of active business conditions whenever they develop again.

How soon business conditions may be expected to improve permanently is a matter of doubt and we do not find anyone in business who wishes to be set down as a prophet in this connection, but there has been a general feeling for a few months past that the present summer will see trade commencing to improve. The remarks of Hon. W. T. White, Minister of Finance in the Canadian Government, upon the occasion of the presentation of his recent budget, formed probably the most encouraging statement in this connection which can be quoted, and as they come from a man who is in a better position almost than anyone else in Canada, to understand the world-wide conditions which have brought about the depression, his views are of the greatest importance. "There is no doubt," Mr. White said, "that the severe and prolonged financial stringency through which the business world has passed and from which it is only now emerging, marked the culmination of one of those so-called trade cycles well known to economists. Viewing world-wide conditions during the past few years it is apparent that such a cycle has been passed through. We have seen normal money conditions, good times throughout the world, the expansion of enterprises, vast increase in capital expenditure upon railway and other construction in Asia, India, Egypt and in North and South America. Last year there was experienced a shortage in capital in all the financial centres, with constantly increasing interest rates, until after a period of prolonged and severe liquidation and the elimination of vast amounts of inflated values, something like normal money conditions again prevail. The world is now in a period of general, but it is hoped, temporary trade slackening. Without such slackening the financial stringency must have continued. The trade slackening alone could bring it to its appointed end. The conditions I have referred to are world-wide. We are particularly interested in those of Canada. Our production has shown a most gratifying increase in all the great departments of our national activity. In foreign trade this has been our greatest year. What is our present outlook? Bankers and business men unite in the opinion that while it is a time of prudence and caution, it is also a time for confidence and courage."

A Dangerous Fire Season Expected

Reports which have been received by the Forest Branch of British Columbia indicate strongly that there is much likelihood of a hot, dry summer occurring this year and that, on this account, the danger from forest fires will be greater than usual. This is a matter of importance to all timber owners and the Forestry Branch has commenced sending out letters to logging operators, to warn them of the danger, and to secure their co-operation in burning off all the logging slash at a safe season. In one of these letters the Forest Branch states that the most dangerous places are near buildings and along railroad rights of way and public roads. These should be looked after first. By observing the following simple rules the burning may be safely done.

1st. Burn as early in the spring as possible. If the burning was not completed before May 1st, a permit should be obtained from the local forest guard and the burning carried out under his supervision. Delay should not be made until the soil becomes too dry,

because valuable vegetable matter which enriches the soil will then be burnt up.

2nd. Always construct a light fire break around the slash, by throwing any brush or litter in for say 20 ft. This will confine the fire and give a chance to get around it quickly should it start to spread.

3rd. If possible have one or more neighbors assist in burning so that the fire may be controlled at all times.

4th. Always start fires in the afternoon if conditions are at all dry. The best time is about five o'clock. The brush is then dry from an all day's sun and burns better. There is little chance of a wind springing up, and the fire burns out during the night.

5th. If the slash adjoins timber, start from the timber side and burn out until a good guard is burned all around the timber. Start fires on the upper side of a side hill slash and burn down the slope. When a good guard has been burned along the top fires may be set at the foot of the slope and allowed to burn up.

6th. Burn over the area as quickly as possible.

7th. Keep close watch on this area until all fires are out.

In another letter which has been sent to operators upon whose property the Forest Branch knows of the existence of considerable areas of dangerous slash, attention is drawn to the increased danger to camps, logs, and all other logging property, by allowing the slash to remain. While it is impossible to say definitely what are the best methods of burning with safety the following rules are given as certain to be of assistance:—

1. Always construct a trail or a light fire-break around the slash-ed area before starting fires. This will serve to confine the fire and also permit men to get around the fire quickly.

2. Be sure and have enough men on hand when you start a fire to control the fire should it threaten to spread beyond the slash.

3. Never start a fire in the morning unless you feel certain a strong wind will not arise. The best time to start a fire is after 4 o'clock in the afternoon on a calm day; if the weather is warm and the slash dry, all the better.

4. If the slash-area is surrounded by timber, start fire first on the leeward side if there is a breeze, or on the uphill side if on a slope. When the danger of fire spreading beyond the area to be burned is past, set fire on the windward side or at the base of the slope; also whenever possible take advantage of a breeze blowing away from green timber.

5. Burn over the area as quickly as possible. This can be done by starting fires in a large number of places.

6. Keep a watchman on the area burned until all fires are out. Cut down any snags which may be burning. All fires should be completely out before June 15th.

Experience has shown that slash can be burned safely at the cost of 5 to 20 cents an acre, and that this expense is fully repaid by the resulting added safety of the camps, equipment, and surrounding timber.

Investigations to Eliminate Wood Waste

It has been estimated that in converting logs into finished lumber and lumber products, the waste amounts to over 50 per cent. of the bulk of all trees cut for lumber. This is equivalent to an annual loss of from \$10 to \$15 for every man, woman and child in the country. At present it is impracticable from a financial standpoint to reduce this waste as there is no market for the tree tops, culls and weed-trees left in lumbering operations, and only a very limited one for the bark, slabs, sawdust, edgings and trimmings of milling operations. The Department of the Interior is recruiting the staff of its Forest Products Laboratories, recently established in connection with the Forestry Branch, with skilled mechanical and chemical engineers and by constant experimentation it is hoped to find a commercial use for these products.

The Laboratories, which are operated in connection with McGill University, contain the most complete equipment on the continent for making timber tests. It is planned to submit each Canadian wood to over a thousand tests in order to establish as complete tables of the mechanical properties of these woods as now exist for steel and concrete. When these tests are published, as accurate information as can

be obtained will be at hand with regard to such questions, for instance, as to how great a weight a wooden column of a particular species will stand without risk of breaking, how great a burden can be carried by a beam of a certain species of wood of given dimensions, and other similar questions.

Timber has often been shunned as a structural material because no reliable figures regarding its strength were available. When complete tests have been made it is regarded as certain that a demand will be created for some of Canada's tree species which are now left in the woods as valueless. Not the least important line of investigation will be to develop chemical methods for utilizing minor wood wastes. A large percentage of the small-sized waste wood can be utilized by the process known as "destructive distillation," but the machinery employed in this process is not very efficient. The manufacture of ethyl alcohol and producer gas from sawdust has already been proved feasible. In the securing as Superintendent of the Laboratories Mr. John S. Bates, B.A., B.Sc., one of the foremost authorities on wood-pulp manufacture in America, the Department has also ensured the development of this branch of wood utilization.

Team Track Switching—The Shipper's Rights

The refusal of some of the railroad companies in Canada to permit cars to be switched from connecting railway lines, for team track delivery, causes inconvenience to many shippers who are served by the Canadian Northern Railway. Cases are continually being reported where switching to a team track in Toronto is refused by the Canadian Pacific Railway, or the Grand Trunk Railway, from the Canadian Northern. Cars which have arrived on the C. N. R. are frequently subjected to great delay and uncertainty, causing heavy additional expense in order to get the lumber delivered. Producers who have only C. N. R. connections are thus greatly handicapped by their inability to reach important markets.

The fact of the matter is, that shippers have a definite right to require the railways to switch cars under such circumstances, but are not taking advantage of their privileges. According to a statement of the Dominion Board of Railway Commissioners (No. 19801.70) issued on April 8th, 1914, and written by the chief Commissioner, "a switching movement is provided for by tariff properly issued and filed. The companies cannot, under the terms of the Act, decline traffic properly

offered to them under these tariffs and within the terms of the tariffs, as I hold team tracks to be, until proper notice of cancellation has been given. As the cancellation of these tariffs will mean that the traffic will move at higher tolls, the result is that the cancellation cannot be effective until thirty days after its publication."

In other words, tariffs are now in effect, filed under the provisions of the Act, under which the railway companies are obliged to provide switching to team tracks from other railways, and in order to escape from this obligation the railways would have to file new tariffs cancelling the old ones, which could not be made effective until after the expiration of thirty days from the date of the issue of the cancelling tariff; during which time the shippers would have an opportunity of appealing to the Board against the cancelling tariff.

The Board's order dealing with this question is known as the general interswitching order and was issued on July 8th, 1908. It establishes certain tolls for interswitching generally, within certain limits. Commenting upon this order, the Chief Commissioner in his statement of April 8th last says:—"A further ruling was made on the

3rd of February, 1912, to the effect that the Interswitching Order deals only with the tolls payable, and was never intended to compel one railway to turn over its entire terminals to another or others. Notwithstanding the rulings of the past, the railway companies, as evidenced by the circular issued by the Canadian Pacific and already referred to, have at least in part carried on interswitching so as to include team track deliveries. There is no doubt that team tracks do constitute, as has in the past been found by the Board, terminals of the respective companies, and it well may be that the Commission should not enable one company to carry on its business by the use of the terminals of another, and that, if such a principle was adhered to, general business would suffer largely, as no company would be able to get the slightest advantage in putting in expensive modern terminals giving the shippers an advanced or accelerated service, if their facilities could be made use of by any other company." This feature of the question, the Chief Commissioner says is too large a question, in view of the considered judgments of the Board, to deal with at the present time.

Apparently therefore, the position as it stands to-day is that the railway companies are obliged, on account of the general interswitching order and its most recent interpretation by the Chief Commissioner, to provide for switching from one railway on to the team tracks of another, and until the Board may have taken up the whole matter and issued a new order, or may have passed upon some new tariff issued by the railway companies, shippers have a right to require such switching to be performed. The whole matter at present is apparently one of tolls, to be settled between the railway companies themselves.

The statement of the Chief Commissioner also makes note of the fact that the railway companies have been directed to furnish the Board with information as to cost of movement and the effect of an order which would include team tracks as well as private sidings. It may be taken for granted therefore that in the course of time, this whole question will be gone into by the Board and an order issued which will place it on a more satisfactory basis for all concerned.

Editorial Short Lengths for Busy Readers

Arrangements which are being made for advertising the lumbering industry in connection with the Pacific Coast Ad. Men's Convention at Vancouver this month are rapidly nearing completion. Lumbermen and others associated with the industry in different parts of British Columbia are supporting the scheme and co-operating extensively. A number of excellent films for moving pictures have already been secured, showing the mills in operation. Other films are being made showing interesting logging operations. These moving pictures, together with moving pictures of the procession to be held at Vancouver will be distributed all over the American and European continents.

Canadian trade commissioners in a number of countries are now gathering information regarding the timber and lumber trade, at the request of the Minister of Trade and Commerce. This request has been made as a result of suggestions put forth by Hon. W. R. Ross, Minister of Lands for British Columbia. Mr. H. R. MacMillan, Chief Forester for British Columbia, states that he anticipates good results from this harmonious co-operation on the part of the two governments. Mr. MacMillan also reports that the British Columbia Department of Lands is making arrangements to send to points where these commissioners are stationed—particularly Australia and New Zealand—exhibits of finished articles made from British Columbia timber. In this way it is hoped to demonstrate, at points where it will do the most good, that British Columbia timber is very suitable for all classes of heavy timber construction as well as for the finest manufactured work, and thus to secure a much larger market in these countries.

The present Timber Royalty Act of British Columbia is chiefly significant in that it makes provision for the basing of all timber royalties, subsequent to January 1, 1920, on the sale value of the timber cut, over and above an arbitrarily fixed price of \$18 per thousand feet board measure. The percentage taken by the Government of this prospective value-increase will be at first 25 per cent., gradually rising to 40 per cent. in the succeeding 25 years.

This is no new principle, for as early as 1889 the Dominion Government required from holders of timber limits in western Canada a royalty of 5 per cent. of the total sale value of the lumber cut, which value was to be based on the average price obtaining during the three months preceding the sale. But at that time the price of lumber was not sufficiently high to bring in any very large revenue on this percentage basis, so in 1898 the stumpage dues were changed to the fixed rate of 50 cents per thousand feet, board measure, which is the rate at present. Although the retention of the percentage royalty would have secured larger returns from this source with the steadily rising lumber prices, yet the principle of selling the timber at a widely advertised public auction ensures the obtaining, through the additional

bonus offered, practically the same price for the timber without the former inconvenience of constantly adjusting the stumpage dues.

As the competitive sale of timber by means of the bonus system is common throughout Canada, there is little likelihood that the Government does not secure a fair share of the present value of the timber sold, and by reserving the right to alter the stumpage dues as the price of lumber increases, a share in its future value is also ensured. In fact, in Ontario the after results of some sales go to prove that the government received more than its share.

It is expected by some of those engaged in the pulpwood business in Quebec, that the new Order in Council of the Quebec Government, prohibiting the export of pulpwood or undressed lumber from lands granted as subsidies to railways, as well as from the present Crown lands, will result in a radical change of plans on the part of various big American and Canadian syndicates. The far-reaching influence of the new law may be gathered from the fact that the Provincial Government has granted no fewer than 13,625,949 acres of land in subsidies to railway companies. Much of this is valuable timber lands, and big areas of it have been sold by the railway companies to various syndicates. These syndicates, being under the impression that they were buying freehold land, to do as they like with, are now somewhat surprised to be confronted with an embargo against the export of pulpwood or lumber, except in a manufactured state.

In the May 15th issue of the Canada Lumberman information was published in reply to an enquiry regarding silver spruce for use in the manufacture of aeroplanes. The National Aeroplane Company of Chicago, Ill., replying to an enquiry upon this subject report that they have received a letter from the Government Wood Laboratory in regard to this matter. The Government reports that "Silver Spruce," "Western Spruce" and "Oregon Spruce" all probably refer to Sitka Spruce (*Picea sitchensis*) which is the most important spruce found in the Pacific Northwest. They say that this is sometimes called "Tide-land Spruce." Although they have data on the strength, elasticity, density, etc., of several varieties of spruce, they have not as yet the same information with respect to "Sitka Spruce," which they will be able to obtain only during the coming winter.

In order to obtain silver spruce, the National Aeroplane Company suggest that the best way would be to get in touch with some wood expert on the Pacific Coast, say Vancouver or Portland. Their own experience they say, has taught them the advisability of not relying on regular lumber dealers for obtaining special aeroplane woods. After a long search last year for suitable white ash (*Fraxinus Americana*) they finally had it cut specially in Tennessee. They were obliged to pay \$500 a thousand feet, but report that they obtained a quality of wood which they do not think has ever been put into aeroplanes before.

The Reader's Viewpoint on Trade Topics

Eastern Markets for B.C. Products—The Scalper's Influence on Trade— Market Reports from Readers

B. C. Products in Eastern Markets

Editor Canada Lumberman:

Victoria, B.C.

The writer is directly associated with, and interested in the Genoa Bay Lumber Company, at whose mill the large Toronto order referred to in your recent article regarding the Panama Canal, is being manufactured for the Robert Dollar Company. We naturally are seeking a market for the side lumber produced while cutting the Toronto order, and have, therefore, been investigating the possibilities of the Atlantic Coast. Our investigations have led us to the conclusion that there is very little opening in that market for our common grades of the shorter lengths, and the ordinary flat grain clears which would have to come in direct competition with the products of the Atlantic coast mills. We believe that our only chance to do a profitable business is to supply classes of stock not easily produced by the eastern mills, such as E. G. Clears, long lengths of dimensions and long timbers. We also hope to dispose of some boards of the merchantable grade in that market.

By way of summing up, I would say that our chief advantage to be expected from the Canal will be the opportunity afforded our coast mills to send to the Atlantic seaboard classes of stock not now easily produced by eastern mills at a cost, while not prohibitive to the builder, yet high enough to give the mill a fair price, and the carrier a reasonable freight.

Your article under the heading "B. C. Fir and the Panama Canal," is very timely and a good statement of the situation, particularly that portion depreciating the efforts being made by some of our manufacturers to get into the eastern market by cutting prices. Such a course can have no other result than to destroy the possibility of doing any business on a profitable basis.—Cameron Lumber Company, Limited, J. O. Cameron, President.

Expects More Settled Trade Conditions in B. C.

Editor Canada Lumberman: New Westminster, B.C., May 19th.

Judging from the volume of business which we are receiving, we feel that the demand at least, shows an improvement. Now as trade is a question of supply and demand, the time is not far hence when we will be able to receive a fair price for our commodity again.

A number of the mills are closed down here, and more are considering closing which, of course, means a curtailment of the supply, and I feel quite confident that we will receive a fairly good fall trade, and that by next year the lumber business here will get back to normal. There is also to be considered, the fact that the Panama Canal will be in shape to handle, at least some of the lumber traffic next year. This will probably mean that the rail trade will not be so flooded, and that every person will seek out, more or less, permanent channels for their output. The prospects are, that when business has settled down in its new channels British Columbia will never again be so badly upset as it has been for the past six months.—J. G. Robson.

The Scalper a Menace

Editor Canada Lumberman: The last clause in John Harrison & Sons article, in your issue of May 15th, page 29, gives a fair illustration of our ideas, but not nearly strong enough, as there are a great many people in Toronto and other places who call themselves Lumbermen, who could not possibly tell one kind of timber from another, and again they try to scalp some one who will give them an order and then try to get next to the manufacturer to fill the bill and never have one dollar invested. These men are what we consider an injury to the trade. They become conversant with terms, but if you would ask them to go out and inspect a mixed car or cargo we doubt very much if they could do so. Had we the time, we might go on and cite instances. Manufacturers could, if they would, tell you more than we can about this.

We aim to buy all our lumber direct from the mills, when, if any discrepancies occur, they can generally be adjusted.—Retailer.

No Snap to Business at Boston

Editor Canada Lumberman: Boston, Mass., May 11th.

There is a moderate volume of trade in New England at present, but conditions are not very satisfactory. There is no snappy business and no one seems to want to buy much lumber ahead. It has been felt rather generally that there is likely to be a good supply of spruce this

year from the east and that prices are likely to suffer in mid-summer—this is often the case.

General business, as well as the lumber business, seems to be rather light and nobody seems to know exactly when to look for an improvement.

Southern pine and "roofers" have been selling at very low prices here, as well as other southern pine products. It is thought however, that they are at the bottom and cannot go lower.

On the whole, there is not much to be said. There seems to be no marked change in business. It goes along in a moderate way—Shepard & Morse Lumber Company.

Retail Trade Better Than The Average

Frank McLean, Brigden, Ont., May 18th.—The lumber trade in this district has all the appearances of enjoying a good year, and in some lines the outlook is for a trade considerably better than the average. This is the case especially in regard to silo stock. The prices that farmers have been securing for their cattle for some time back are beginning to have a good effect upon business. Instead of selling calves at from one to three dollars each, the farmers are now keeping them until they are three years old and getting from eighty to one hundred and twenty dollars each. Every farmer who is doing this has a large barn with stables in the basement and a silo close by. Nearly every farmer who has not such a set of buildings is figuring on putting them up just as soon as he can. The price of cattle is making it possible for quite a number to do this, this season, and hundreds will follow in the near future. This district has developed into a good corn producer, and where corn will grow well, silos are sure to be in good demand.

There is also a good sale for cedar posts and shingles. The rail fences are coming to the end of their life in great numbers, and as there is no more rail timber available, wire and cedar posts are being used.

Shingles are also more used now for roofing old buildings than they were a few years ago. There was a time when most men thought, that some of the felt roofing was good enough for roofing an old building, but they seem to be mostly going back to shingles now.

A considerable quantity of lumber is also produced in this district in slack cooerage. There will be at least from six to ten million staves, with possibly heading and hoops to match produced this season. There is also some white oak in this district still, and a quantity also suitable for piles.

Market Dull in Bruce County

T. F. Mullin, Chepstow, Ont., May 18th: Really marketable lumber in this district is dull; in fact there is none offered. During the heavy wind storm that swept this country a year ago a great amount of timber was blown down which could not be cleared out entirely last fall and winter. This afforded an opportunity for four or five extensive manufacturers to buy up the large amounts of surplus stock produced, a supply sufficient for some years to come.

The scarcity of bush and the high price offered for logs by large manufacturers have combined to force the mill man to satisfy himself with custom selling, or else close up his business. The farmer will not cut down or offer for sale his limited amount of bush unless he gets a large price for it. This supply is readily purchased by the large manufacturers and as a result there is no lumber stock to export from this part of Bruce County.

Outlook Bright at Berlin

H. J. Hall & Son, Berlin, Ont., May 18th: We are quite busy in our line (although the furniture trade is very dull), and the outlook for this year seems very bright. Wholesale lumber travellers who may be reporting that trade being slow have no doubt found that the retail yards are stocked up, which is the case with us. We are therefore buying very little.

Trade Quiet at Brantford

The Schultz Brothers Company, Limited, Brantford, Ont., May 16th: Building in Brantford has been very quiet this spring. Our planing mill is only operating forty-four hours per week. Our brick yard has not yet started operation, but we have practically cleaned out the stock carried over from last fall, and expect to be operating

again next week. There has been a very fair demand for brick from out of town, but locally the demand has been rather quiet.

The box business is very quiet. This is due in a great measure to the fact that the canners are in such bad shape and it seems almost impossible to get any box orders from them.

The principal amount of the building that is being done consists of residences, there being very few factory extensions.

Dresden Trade Better Than Last Year

Laird Bros., Dresden, Ont., May 18th: Editor Canada Lumberman: Our trade has been in excess by a considerable amount of that of last year, during the first four months of each, and we are not looking for any slackening off in trade. The heavy rains we have had in this section for the last four weeks may put a stop to certain work, but we think the year will compare favorably with the previous year.

There is a tendency on the part of certain trades to make inroads upon the lumber business, but there will always be a place for quantities of lumber in any building. We think possibly the quiet trade reported by wholesale travellers could be overcome, but we have not the time to discuss these matters to their benefit.

Reports Upon Driving Conditions

A report from St. John, N.B., states that Mr. J. H. Hickman of Dorchester was unusually successful this year in getting out his drives. The cut was about 5,000,000 feet, a larger quantity than usual and the logs have all been brought out. Usually his drives occupy 15 or 20 days, but this spring he managed to complete it in 6 days. There was sufficient water to fill the streams, but not enough to overflow the meadows.

Latest reports also indicate satisfactory results in connection with the Miramichi drives and those on the Upper St. John and its tributaries.

Gilmour & Hughson, Hull, Que., May 13th: Driving conditions seem very bad for getting out logs. Our reports from our creek drives are very discouraging, and it is almost assured that if we do not get rains very shortly most of the logs in and on the Gatineau will be stuck. Rains coming later may help to some extent, but will not be the same as if we had them now.

August Herron, Barry's Bay, Ont., May 15th: Driving conditions have been good in this district and there has been sufficient water. The cut is considerably larger than it was a year ago, but I understand that it will all be taken out.

Booth & Shannon, Biscotasing, Ont., May 14th: We do not anticipate any trouble whatever from low water on our drive here. We have enormous water reserves, which practically allow us to take down our logs at any period of the spring or summer.

New Ontario Colonization Company, Jacksonboro, Ont., May 14th: We do not think that the low water will affect us in this particular part of the country. The water, however, in the streams up here is not as high as it was a year ago.

The J. D. McLaughlin Company, Limited, had about 25,000,000 feet of logs in the drives in Three Brooks and Trout Brook, N.B., this spring. These were brought out safely.

National Hardwood Convention Arrangements

At the annual meeting of the National Hardwood Lumber Association, which will be held in Buffalo on June 18th and 19th, one of the interesting entertainment features will be a special trip to Niagara Falls. At 2 p.m. on June 18th, members and guests will board special traction cars which will be in waiting at convention headquarters. These cars will proceed to Niagara Falls and convey the party to all points of interest between Niagara Falls and Lewiston on the United States side and Niagara Falls and Brock's Monument on the Canadian side. Dinner will be served at the New Clifton Hotel on the Canadian side, and after dinner the party will return to Buffalo at about 9.30 p.m.

The National Hardwood Lumber Association has a number of Canadian members, among whom the following are included:—Glen-gary Lumber Company, Berlin; Long Lumber Company, Hamilton; Hamilton Bros., Holland Centre, Ont.; Seaman, Kent Company, Limited, Meaford; Geo. C. Goodfellow, Montreal; Standard Mills, Limited, Montreal; John Harrison & Sons Company, Limited, Owen Sound; Keenan Bros., Limited, Owen Sound; Edward L. Casey, Sudbury; Quincy Adams Lumber Company, Limited, Toronto; C. G. Anderson Lumber Company, Toronto; Atlantic Lumber Company, Toronto; Robert Burry & Company, Toronto; Canada Lumber Company, Limited, Toronto; Edward Clark & Sons, Toronto; Graves Bigwood & Company, Toronto; Johnston Lumber Company, Toronto; R. Laidlaw Lumber Company, Limited, Toronto; Wm. Laking Lumber Company, Toronto; Mickle, Dymont & Son, Toronto; Oliver Lumber Company, Limited, Toronto; Spears & Lauder, Toronto; Wilson Lumber Company, Limited, Toronto.

It is expected that quite a number of representatives of these firms will be present at the convention. The influence of the Association in Canada is steadily spreading. Any hardwood lumbermen who may not have already joined will be welcome if they attend the convention, and may be assured in advance of having a most enjoyable and profitable visit.

National Wholesalers' Committees

The report of the proceedings of the 22nd annual meeting of the National Wholesale Lumber Dealers' Association which was held at Buffalo, N.Y., on March 4th and 5th has been published in attractive book form and sent to the members of the Association. The report contains all the speeches, addresses and special reports presented at the meeting. It also contains the list of committees for the current year which have since been appointed. The Canadian members included on these committees are as follows:—Board of managers of Bureau of Information, Duncan McLaren, Union Lumber Company, Limited, Toronto; Railroad and Transportation Committee, A. H. Campbell, Campbell, McLaurin Lumber Company, Limited, Montreal, P.Q.; Coastwise Insurance Committee, Angus McLean, Bathurst Lumber Company, Limited, Bathurst, N.B.; Forestry Committee, J. S. Gillies, Braeside, Ont.; J. B. White, Riordon Paper Company, Limited, Montreal, P.Q.; Membership Committee for Ontario, Quebec and Maritime Provinces:—Duncan McLaren, Chairman, Union Lumber Company, Limited, Toronto; Walter Laidlaw, R. Laidlaw Lumber Company, Toronto; Philip Walker, Shepard & Morse Lumber Company, Ottawa; A. H. Campbell, Campbell, McLaurin Lumber Company, Montreal, P.Q.; W. T. Mason, Mason, Gordon & Company, Montreal, P.Q.; W. G. Power, River Ouelle Pulp and Lumber Company, St. Pacome, P.Q.; and Angus McLean, Bathurst Lumber Company, Bathurst Village, N.B. Special Committee on Workmen's Compensation, C. Jackson Booth, Ottawa.

Woodworking Costs

Editor Canada Lumberman:

Hamilton, May 12th.

We have read the article which appeared in the Canada Lumberman of May 1st upon "Cost Accounting in Woodworking Plants" written by Mr. Jonas Howe. This appears to be a practical and effective system for getting at the cost of a "job" in a woodworking plant. The graphic time card is an excellent idea as its simplicity prevents mistakes by the operator and his whole time is accounted for at a glance. The cost card is very compact and affords a ready means of indexing the jobs for future reference. The idea of keeping the time of the different employees engaged on one order on the back of the card adds greatly to its value.

It might be interesting to know how Mr. Howe provides for keeping track of the cost of a line of goods like doors or sash, of which large quantities are made up for stock. Does he find the cost of each size separately or group them, having closely related sizes in the same group? How does he pay the employees working on such stock orders, at a rate per hour or by the piece? Has he any effective system to suggest for keeping the time on stock material by piece work, so as to increase the product at a reduced cost?—The M. Brennen & Sons Manufacturing Company, Limited.

Mr. Howe, writer of the article under discussion states that, in getting at the cost of a line of goods such as doors or sash which are made up in large quantities for stock, it is necessary to get the cost of the group, and from that arrive at a unit cost per piece or per article. He has had no experience with piece work, having been only in plants where the wages were paid upon the basis of time. The system which he has worked out could be applied, however, to piece work. In putting a certain class of work upon a piece work basis, it would be necessary to apply the cost card principle, as outlined in his article, for a few months. From the information thus secured one would have a good guide for arriving at piece work prices.

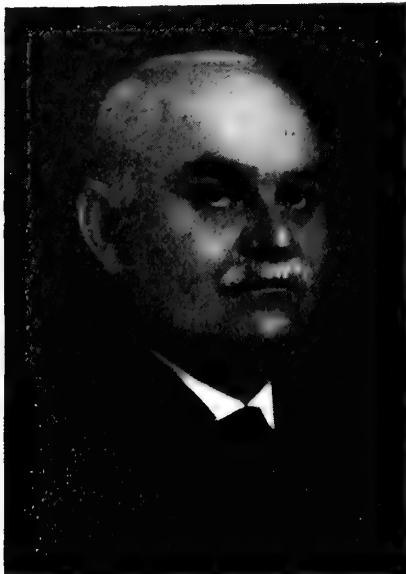
A Lumber Salesman's Bravery

News recently received from New Brighton, Liverpool, England, tells of the heroic act of Mr. Robert W. Brown, a brother of Mr. H. Brown, Jr., travelling salesman in Ontario for the Atlantic Lumber Company of Toronto. Mr. Robert W. Brown, who is a son of Mr. H. Brown, timber merchant, Liverpool, England, recently risked his life by diving into the water and bringing out an injured workman who had fallen from a crane driver, working on the dock. The unfortunate man struck the dock, injuring his head and fell into the water. He was unable to help himself and Mr. Brown, who is a timber salesman, immediately went to his assistance and ultimately got him to shore. Unfortunately, the man was so injured by his fall that he succumbed shortly after reaching the hospital. Mr. Brown's bravery has been highly commended by all who know him and it has already been suggested that it should be acknowledged by the recognized authorities.

C. S. Rollins, Coe Hill, Ont., May 16th: The usual quantity of lumber has been delivered at this station during the past season. The prices now being paid for all kinds of lumber, except hemlock, are the same as they were last year. Buyers are offering \$2 less for hemlock. The turn over is small at the reduced price.

Portable Sawing in Nova Scotia Woods

Sable Lumber Company's Operations in Queens and Shelburne Counties—Five Mills Sending out Their Product by Railroad



R. S. Webb—General Manager.

The portable mill system of conducting lumbering operations, which has been brought to a high state of development in the New England States, is being applied in a very interesting manner by the Sable Lumber Company, Limited, who own some 51,000 acres of timberland in Queens and Shelburne Counties in the province of Nova Scotia. The Sable Lumber Company, Limited, is owned by New England investors who, after studying the various methods of operating in Nova Scotia, decided to make use of this system as being the most suitable for the conditions to be met with in the limits which they own.

Lumbering by portable mills under such conditions is preeminently a railroad proposition. The Sable Lumber Company operates the Queens County Railroad, with 27 miles of track, two locomotives and 65 cars. This railroad connects with the Halifax and South Western Railroad at Wilkins Siding where the Nova Scotia headquarters of the Sable Lumber Company are located. The main line of the Queens County Railroad runs north from Wilkins Siding towards the back portion of the company's holdings. From this main line, spurs are laid into the woods and a portable mill is set up on each spur. A picture of one of these portable mills is shown in one of the accompanying illustrations. At these mills, the lumber is loaded directly on to the cars from the saw, and is taken to Wilkins where the edging mill and "sticking" ground are located. The boards, as they come from the saw, are sorted on to the cars in loading. Those which are suitable for square edge stock are placed on one car and those which are suitable only for box boards are placed upon another. These are hauled directly to the sticking ground and stocked as shown in another illustration.

Five of these portable mills are operated by the Sable Lumber Company in the woods. Four of them are continually cutting and one is continually moving and setting up. All the moving of the camps is carried on by rail. Sleeping bunks, cook houses, and stable are built of such a size that they can be loaded upon a flat car. This work is so systematized that it can easily be handled in one day for one mill.

The portable mill system permits logs which are cut in the woods to be manufactured into lumber and reach the sticking grounds upon the same day. Wooden sleds with wooden shoes, known as "scoots" in New England, are used for hauling the cut-up logs from the stump to the mill. By using these scoots, in connection with the railroad, the company's manufacturing operations are conducted as easily, and fully as cheaply on bare ground, as on snow. Both oxen and horses are used in these operations, the latter being far the better for summer work.

The sticking ground at Wilkins is about a mile long, with three

tracks running through it. The edging mill is located at the upper end of the sticking ground. The square edge boards are laid directly on to small cars and taken by horse power to the sticking ground shown in another of the illustrations.

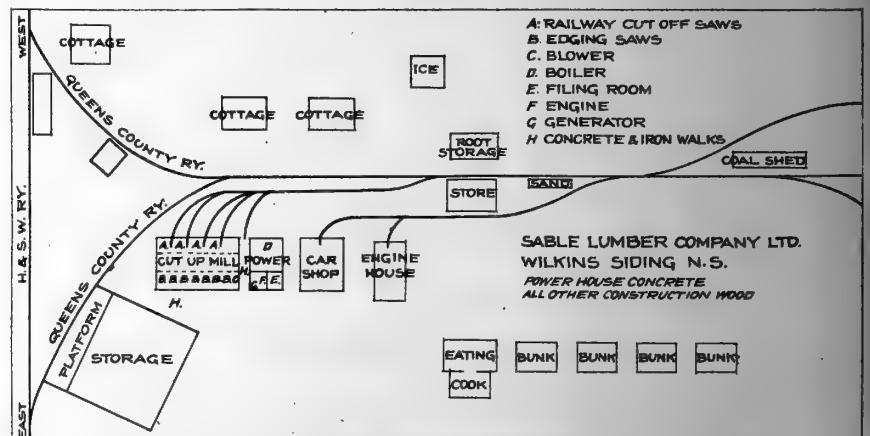
One of the accompanying illustrations shows a cutting-up mill which is operated at Wilkins. In this mill the box boards are cut to suitable lengths, edged and stored for shipment in the storage building shown in one of the illustrations. At the sticking ground the boards are loaded on tram cars which hold about 2,000 feet and are hauled to the mill by one horse. Four tracks run into the mill the length of one car, and four railway cut-off saws are located in such a manner that the operators handle the boards from the cars to the saw and put the cut stock upon trucks which carry it to seven edging saws. From thence the stock is taken to the store house which has a capacity of 2,000,000 feet.

From October 1st, 1913, to May 1st, 1914, the cut of the Sable Lumber Company amounted to 8,000,000 feet. The larger part of the stock is used by a large shoe manufacturing concern, being made into cases for their output. The balance of the stock is sold in England and New England.

Mr. R. S. Webb, general manager of the company, was form-



G. R. Webb, Assistant Manager.



erly interested in the manufacture of lumber in the State of Maine. Mr. G. R. Webb, assistant manager, had seven years' training in the Maine woods before engaging with the Sable Lumber Company.

One of the illustrations accompanying this article is a plan, from which readers may obtain an excellent idea of the way in which the cut-up mill, storage building and other buildings connected with the operations at Wilkins are laid out.



Tail End of a Portable Mill.



Ox and Horse Teams are both used in Logging.



Cutting Up Mill of Sable Lumber Company—Wilkins, N. S.

The Straight-Edging Rip Saw

There is no line of woodworking machinery in which there has been more striking recent development than in power-feed rip saws, and this development holds interest for both the manufacturer and consumer of hardwood lumber. There are not only types of these new machines that are interesting to the furniture manufacturer and to other users of hardwood lumber, but some of them hold particular interest also for the manufacturer of hardwood lumber, says *Hardwood Record*. There has always been a use for the rip saw in the hardwood lumber mill, but the most extensive use of such saws has been found in what the trade terms edgers—single side edgers and gang edgers. Rip saws have been used to some extent on the side for making small dimension stock, but have never been considered as factors in reducing the regular manufactured stock to square edges and to usable form. The old rip saw known as such, whether power feed or hand feed, was not considered a straight edging machine within itself, and for straight sawing the use of a fence was resorted to, which of itself really presumes upon one straight edge being already on the stock to be sawed to dimensions.

Among the new types of power feed rip saws some are now offered with the saw swung above the work between two feeding rolls and the work carried on an endless chain in the bed below. This style is featured as a straight-edging type, the claim being made that it will take many-edged stock or any other stock and rip it to a straight line without fence or guard.

This new idea in circular rip saws seems to be really a development from the sharp competition between the band rip-sawing machines and circular rip saws. The band saw type was the first to use the chain or endless bed type of feed, and it made such inroads in the field of rip-saw work that the makers of circular saw machines had to bestir themselves, and out of it all has come some new offerings with a combination of chain and roller feeds that should prove interesting and valuable additions to the machinery list for working hardwoods of various kinds in the modern sawmill.

The straight-edging rip saw offers possibilities both as an edger and as a machine for reworking lumber and making special dimension stock. It has not the capacity nor will it take the place of the gang edger in some mills and do a wider range of work in shorter time with less expenditure of elbow grease on the part of the operator.

Another important use that may be found for this same type of machine is in the assembling and wholesale hardwood yards where a



Storage Building of Sable Lumber Company—Wilkins, N. S.

certain amount of trimming and reworking of stock is essential to fill orders satisfactorily and to get full value out of the material. With electric current available in almost all cities and manufacturing centers, it is a comparatively easy thing to take a machine of this kind, set it up in the most convenient place for getting material to and from it and to connect it up with a motor. This convenience of the electric drive is leading to the use of a number of machines about the lumber yard that in times gone by were impractical because of the fire hazard involved in power producing and investment necessary for power plant equipment. To those adding machinery to help out the yard equipment this straight-edging rip saw seems worthy of special attention.

Whether willingly or unwillingly, both sawmill men and wholesale yard men in the hardwood trade are finding themselves getting more and more into the special dimension business, because the consuming trade is demanding more dimension stock and because it is the logical way to a proper utilization of raw material. That is one of the reasons why some of the new offerings in power feed rip saws are of special interest to manufacturers of hardwood lumber as well as to the consuming trade. They may not fit into every need or serve every purpose, but they do give promise of filling an important place and are certainly deserving of attention and study.

It is expected that the Elk Lake branch of the Temiskaming & Northern Ontario Railway will be extended to Gowganda and Sudbury. A large deputation from the Temiskaming, Sudbury and Nipissing districts waited upon the Ontario Government last week asking for the immediate extension of the road, and provision has been made in the estimates for going ahead with the work. The new road will tap a richly wooded country in spruce and other pulp woods, and at Sudbury will have a working connection with western lines.

The lumber industry in the United States employs 735,000 people, to whom are paid annually \$367,000,000 in wages, the worth of products being \$1,250,000,000. The forests of the country cover 550,000,000 acres.

Last year the fire loss on the Canadian timber reserves was the smallest ever known, only one-fiftieth of one per cent. of the area being burned over.



Sticking yard for Square Edge lumber, Sable Lumber Company.



Sticking yard for Round Edge box boards, Sable Lumber Company.

Cost Accounting in Woodworking Plants

A Concise and Practical System which Enables a Manufacturer to Determine the Cost of his Product—II Raw Material

By Jonas Howe*

THE principal item in the form of raw material which enters into the consideration of cost in connection with the wood-working business is lumber. There are a number of other important items, but the present article will be devoted largely to a consideration of the part which lumber plays in the cost of the finished product.

To find out "the exact" quantities and costs of lumber used in a factory, many methods of calculation have been proposed. A great many authorities have written articles and books upon this subject

1" #1 KD Pine									
WIDTHS									
DATE	RECEIVED FROM	QUANTITY	VALUE RECEIVED RATE AMOUNT	DATE	DELIVERED TO	QUANTITY	VALUE DELIVERED RATE AMOUNT	FEET-B.M. ON HAND	
May 2	on hand	320	4.20 1344	May 2	F.O. 1433	21'	05.5 116	299	
						1412	108'	594	191
						1437	14'	84	177
						1422	135'	743	42
May 3	yard	400	4.20 1680	May 3	1430	37'	05.5 204	405	
				May 31					241

Form 5.—Lumber Record Card.

and it has even become a difficult matter to determine which of these methods is the best, or rather, the most suitable under particular conditions. It may be stated in the first place, however, that in the selection of a system of determining the cost of raw material in the form of lumber, the most important feature of any system to be adopted must be conciseness combined with accuracy. There is so much to be taken into consideration, such as allowance for waste, the cost of material wasted, and the proper ratings for various classes of work put upon the raw material such as previous handlings, dry kilning and culling; that it is unwise to lay down any specified rules for general use without providing a practical method for verifying them. The writer, like everyone else who has had experience with cost accounting, has come across a number of companies which make occasional "tests" in order to ascertain the cost on certain raw material after it has been cut up for distribution. Some of these companies are more conservative than others and check up their raw material with that which is actually purchased. They find then, as a result of their tests, that the quantities used do not balance with the quantities shown in the records of the purchasing department. These tests, in fact, are only a sort of guess-work, used to serve as a transitory guide for temporary purposes.

A cost system to be satisfactorily effective must be perpetual. For this reason all raw material (as well as labor) must be taken minutely into account. At the expiration of some definite period of time the results of this work, i.e., the quantities of raw material (lumber) used in the various jobs will no doubt show some difference when compared with the records in the purchasing department. At this stage of affairs the discontented investigator probably throws up his hands and sets himself down as a poor calculator. In reality he has secured the necessary data for the work which he set out to do, but

* Second of a series of articles dealing in detail with the problem of cost accounting. Written specially for the Canada Lumberman.

CHARGE TO <u>J. Brownlow</u>						
ARTICLE, <u>1 Stand</u>						
F.O. No., <u>1429</u>						
No. PIECES	PART	LENGTH	WIDTH	THICKNESS	WOOD	FEET B.M.
1	Top	2'-2"	1-6	7/8	2. Oak	4
3	Shelves	1'-10"	1-2	5/8	"	8
4	Legs	3'-9"	1 3/8	1 3/8	"	3
						15

Form 6.—Lumber Cutting Requisition

does not know how to take advantage of this information. These differences (balances) should be noted and carried forward to the next period of calculation and adjustments made accordingly.

All lumber, when it is received in the yard, has a definite cost. Large quantities are frequently sold without entering the mill. For these, a very low rate may be fixed as an equivalent to the burden or expense which has been incurred in carrying them. Then there are quantities of lumber which enter the mill and are dressed to a greater or less extent. For these a higher rate must be fixed as an equivalent of the burden or increased expenses incurred in their connection. Then again, there are quantities of lumber which are cut up for detail mill work. The cutting-up department of a factory is continually stocked more or less with the lumber commonly used, and this is frequently culled and reassorted. It thus becomes necessary to provide a Lumber Record Card (form 5) on which the quantities and costs of all lumber received and charged to the factory are recorded on the debit side. The quantities and costs of all lumber cut out for jobs are recorded on the credit side. On the credit side, the quantities and costs entered should tally with the card records, or with an outside company's invoice, after the material has been purchased specially. On the credit side the quantities and costs entered should tally with the quantities and costs on the Lumber Cutting Requisitions (form 6). These forms are filled out by a lay-out man and used for the purpose of recording the material used in cutting out for a job. Copies of forms 5 and 6 are filed in numerical order by the cost clerk, who withdraws them whenever a job is completed. The costs shown upon these records are figured out, making reasonable allowances for waste. The quantities recorded on the cutting requisition cards are posted on the cost cards, together with their ratings for handling, etc., and also on the credit side of the Lumber Record Card. After a certain period, the Lumber Record Cards are balanced and the results will show whether it is necessary to make further adjustment in order to allow for waste or to make alterations in the ratings as they have been charged to the jobs, including the operating expenses of the cutting-out department.

Other raw material which is used directly in the various jobs and indirectly about the plant must be taken into consideration. This material consists of numerous items such as window pulleys, sash cord, hinges, locks, screws, handles, glue, sand paper, oil, files, etc. Every up-to-date factory has its Store, where the raw material (excepting the rough lumber) is kept. Without such accommodation as a store in any large plant, there may usually be seen two or three workmen hunting about for some such material which they require. The result is a continual waste of time, to say nothing of a consider-

No. 17427		
STORE KEEPER, PLEASE SUPPLY,		
NAME <u>J. Brown</u>		
CLOCK No. 207 LOC. No. 141		
QUANTITY	ARTICLE	CHARGE TO.
1	Brass Hatch	F.O. 1466
2 prs	Hinges	" "
24	Screws 3/4" #5	" "
16	F. Brass do 1 1/4" #10	" "
DELIVERED BY,		
		<u>A. Smith</u> STORE KEEPER
FEB 25 1914 191.		
POSTED. R.M. CARD		
POSTED COST CARD		

Fig. 7.—Factory Requisition Slip.

ARTICLE <u>Screws Iron F.H. 1 1/2" #9</u>						
MAX. QUANTITY <u>19000</u> R.M. No. <u>1132</u>						
MIN. QUANTITY <u>19000</u> SECTION <u>F</u>						
DATE	RECEIVED FROM	QUANTITY	VALUE RECEIVED RATE AMOUNT	DATE	DELIVERED TO	QUANTITY
May 1	on hand	54 prs	.24 122	May 4	F.O. 1828	54 prs
						30
						10
						4 3/4 prs

Form 8.—Material Record Card.

able waste of material. Under such conditions the men will help themselves usually to 50 or 100 per cent. more of material than is required, with a view to saving steps in going after more. Whatever is not used at the time is frequently allowed to lie around. Possibly it will be lost or carried off.

With a Store and a clerk in charge every workman knows exactly where he must go whenever he requires raw material. A Factory Requisition Slip (form 7) is used in this connection, and is handed by the workman to the store clerk and the goods are delivered at once, thus eliminating this source of wasted time and material. The requisition is checked and transferred to the cost clerk who posts the raw material items on the cost cards. All mouldings and length stock which is required for certain classes of work may also be considered as store material and handled in a similar manner. Every line of raw material on hand is represented by a Record Card (form 8). With these record cards the quantities of material on hand must balance at the end of a period.

Forms 6 and 7 are finally transferred to the cost clerk who ascertains the quantities and costs of all the raw material used. The direct costs thus ascertained are charged to the various jobs going through and the indirect costs are charged to the department or location where the material is used.

In the third article of this series the subject to be discussed will be indirect labor and material. We expect to be able to publish it in the issue of July 15th.

Dry Weather Gives Forest Fires, a Start

The exceptionally dry weather which prevailed throughout Northern Ontario during the second and third week of May resulted in the starting of a number of forest fires, which threatened to assume serious proportions. In many places in the Ottawa Valley, recent reports stated that, unless rain came very soon, a number of villages along the Pontiac line north of Hull would be in danger of destruction. All the fire rangers employed by the railways, lumbermen's associations and the Conservation Commission were combining to fight the flames.

Serious fires were reported east, north and west of the Grand Trunk Railway's Highland Inn, Algonquin Park.

Reports from Huntsville stated that fires seemed to be raging in nearly every direction. The Axe Lake mill of the Muskoka Wood Manufacturing Company, Huntsville, was totally destroyed by fire and gangs of men were fighting against the flames which threatened the company's camps. In the neighborhood of Sand Lake a forest fire was threatening an important summer resort district. In the townships of Stisted and Chaffey the fires were threatening very heavy losses to the inhabitants.

A report from Sault Ste. Marie, Ont., tells of one fatality already having occurred, resulting in the death of a young girl who was suffocated by smoke.

Fires on Sugar, St. Joseph and Drummond Islands in the Georgian Bay were impending navigation on the inside channel, according to reports received on May 20th.

At Escanaba, Mich., fires were reported in every direction within a forty-mile radius.

Alvin Thompson's tie and timber camps in Gorham Township, Ont., were destroyed by fire, according to a recent report from Port Arthur, Ont. Mr. Thompson's sawmill was saved with great difficulty. A large number of other fires were reported from various parts of the northern country and everybody was looking forward with great anxiety, and hoping that a plentiful rain fall would come in the near future.

Bush Fires Near Vancouver

A despatch from Vancouver, B.C., dated May 22nd says: "During last night and this morning damage of not less than \$100,000 had been done by bush fires within 20 miles of Vancouver. Dry weather for weeks has made the forests like tinder, and so numerous are the outbreaks that a great pall of smoke hangs over the city this morning. This is the hottest day of the season so far and there is no rain in sight. The most serious blaze appears to be at North Vancouver, where there is a great blaze running up Lynn Valley and sweeping along the sides of Grouse Mountain. Besides a shingle mill, eight cottages have been burned, and there are forty more in the path of the blaze. A special steamer, with government fire-fighters aboard, this morning left for Sliamon, a short distance up the coast to back-fire a blaze that has got into the timber.

Forest Fire Season Gets Early Start in U. S.

The first reports of forest fires have begun to come in to Washington from the national forests and they indicate to the federal officers an early start of the fire season, with unfavorable weather conditions from the very beginning. In the north-west there was less

snow on the mountains at the end of the winter than for many years past. Railroad rights of way which were last year deep in snow are reported clear now and dry enough to burn readily. From the Canadian border to Mexico the reports are similar, and there have already been extensive fires in California and Arizona.

The chief forester reports, however, that the fire-fighting forces of the service are organized better than ever before, particularly in respect to the fire detection system of lookout stations. By means of these stations fires are reported quickly and accurately, so that the control forces may be on the ground at the earliest possible moment. In those states where the gravest danger threatens, especial efforts are being made by the government foresters and by co-operative fire protection associations organized among timberland owners, to secure care with fire on the part of campers, prospectors, loggers, and by railroads. The northwestern forestry and conservation association, with headquarters at Portland, Oregon, is one of the leaders in this campaign.

Bad Lumber Fire at Cleveland, Ohio

A serious fire at Cleveland, Ohio, on May 25th, is reported to have wiped out one million dollars' worth of lumber belonging to the Fisher & Wilson Lumber Company. The yards of Martin & Barress are also reported to have been destroyed, also a large amount of property in the adjoining neighborhood.

Expects Higher Prices for Pulpwood

Mr. R. Chadwick, of the firm of Chadwick & Taylor, of the Ord-sall Hall Paper Mills, Salford, Manchester, one of the largest firms of newspaper manufacturers in Great Britain, has recently completed an eighteen months' trip through Canada and the United States, inspecting the various pulp mills and getting information regarding the supply and quality of Canadian pulpwood. In an interview Mr. Chadwick stated:—"The price of pulpwood is bound to increase in the near future, because the limits are getting further away from the mills and it will cost more to bring the timber down to the mills, for the lumbermen will not take on a contract at the old price if their camp is far away from the plant. They have to pay extra for provisions, and there is a heavier cost of transport. At present the mills are paying five and a half to six dollars a thousand feet of wood delivered at the mill from within a radius of twenty miles, and I feel sure the price will go up slowly as the consumption increases. It is true there is a great deal of pulp on hand at present, which has to be cleared out and that will postpone the rise, but it is inevitable in the near future."

Messrs. Chadwick and Taylor have recently completed a seven-year contract for Canadian pulp with a mill at Chicoutimi, P.Q., and now have a contract for a shorter term. They find that Canadian pulp is well suited for the production of the ordinary news print paper used in England.

Transatlantic Lumber Charter Forms

"It is quite nine months since the Documentary Committee of the Chamber of Shipping had suggested to it the necessity of drawing up a reasonable form of charter for the Canadian lumber trade," says "Timber," of London, Eng. In the autumn of last year several steamship owners regularly engaged in this trade were approached for their views on the forms of charter in use, and freely gave them, but so far nothing has apparently been done by the committee. "Already quite a number of fixtures have been arranged for the coming season on the basis of the merchants' form of charter, known as Canconform A. Not content, however, with this favorable document, says the Shipping Gazette, some merchants have devised a new form, called Canform B, which stipulates further clauses in their own interests, and very much against those of owners. Thus the second part of discharge, when two are granted, need not be declared until the vessel has discharged at the first port; the arbitration clause is erased; and a strike and detention clause is inserted which covers shippers against anything that may happen.

"It seems evident that, unless the Chamber of Shipping makes a move in the matter of fitting up a form of charter, the present objectionable forms will grow more objectionable still, as shipowners individually cannot well stand out against clauses in the charter. It must be done collectively to be effective, and the longer the matter is deferred the greater number of objectionable clauses there will be to fight against.

"Surely, says our contemporary, the Canadian lumber trade is still important enough to deserve the attention of the Chamber of Shipping, and this notwithstanding that it is year by year decreasing in magnitude, owing to the fact that the lumber on the eastern side of Canada is fast being used up, and the future timber reserves will be those of the western portion of Canada, as well as those of Japan and Manchuria."

Hemlock Men Discuss the Situation

**Trade Conditions in a Mixed State—Stocks Very Light—
Imported Stock Selling Extensively**

An interesting meeting of Ontario Hemlock manufacturers was held at the Queens Hotel, Toronto, on May 27th. The principal subject of discussion was the trade situation in connection with hemlock in Ontario. This subject was discussed from every point of view and the discussion showed that stocks of dry hemlock to-day are practically out of existence; also that the consumption of hemlock is quite extensive, especially in the large cities, but that the competition of Wisconsin and Michigan hemlock is a very important factor in connection with the trade. Were it not for the importation of these stocks from the United States, it was considered certain that Canadian producers would not be able to handle the volume of trade that is offering. Higher cost of production was reported this year than last year. Most of the manufacturers are getting out their drives successfully. Although there is a feeling of uncertainty as to the immediate future of the market, none of those who attended the meeting were apprehensive of any difficulty in disposing of their stock at a fair profit. Prices of hemlock to-day are probably about a dollar or a dollar and a half lower than they were a year ago, but the manufacturers were of the opinion that there would not be serious difficulty in disposing of this year's cut at such prices.

The meeting was called to order by Mr. W. W. Carter, Toronto, who spoke of the large amount of American hemlock coming into Ontario. The chief trouble however, in Ontario to-day, was to get sufficient dry stock. Wisconsin and Michigan were turning out enormous quantities of hemlock and sending much of it to Ontario, with the result that the Ontario manufacturers were feeling the competition rather severely. He believed that the Canadian manufacturers would have to face this situation for some time. Trade conditions in the States were still unsatisfactory and the consumption of lumber was not enough to keep the manufacturers from shipping heavily into Canada. Until things brightened up in the States and the railroads commenced buying lumber again, no improvement could be expected. The United States mills making Southern pine were marketing great quantities, in order to pay interest on their bonds and they were obliged to sell stock even at a loss.

Mr. Carter also drew attention to the recent law suit in Montreal, as a result of short leaf (loblolly) Southern pine being put into a building where long leaf was called for. This lumber rotted after a year and steel had to be put in its place. The law suit resulted in a verdict of \$71,000 against the contractors. The same class of stock was coming on to the Ontario market and many consumers knew so little about it that they often bought it.

Mr. Norman Hocken, Otter Lake Station, drew attention to the widespread nature of the trade depression. Conditions in Canada were probably not 50 per cent. as bad as they were in the United States and other countries. During the past two years hemlock manufacturers in Ontario had done fairly well. To-day however, their cost of production was so much higher that prices could not be put back to where they were a few years ago. They were going much further back for their timber now than they used to. The standing hemlock timber to-day was probably not more than 50 per cent. of what it was 12 years ago.

For dry stock to-day \$20 could be had. For new stock they were able to get \$19.

Mr. Hocken thought it was a good thing for the trade that the United States stock was coming in. Ontario mills could not take care of the trade if none of the United States stock were coming in.

Mr. J. D. Shier, Bracebridge, Ont., said that No. 1 hemlock was not going very fast. No. 2, was selling all right. Lath were going all right. Prices were down a little as compared with a year ago. He had had no dry lumber to put on the market this spring. He now had about 2,000,000 feet. The weather this spring had been very good for sawing. His mill was running double shift. Possibly after another month they might reduce to a single shift. He had taken out a good cut of logs, but logs had cost about 50 cts. more than formerly. The prices of hemlock lumber would probably be from a dollar to a dollar and a half lower this year than a year ago. One of the troubles now, was that they were paying too much for their raw material. The tanneries were not using as much bark as formerly. When hemlock got up to \$3, \$4 or \$5 on the stump it was too high. Of course, when business was good it was different, but trade was quiet now and this was the time of year when it ought to be good. He was more and more coming to the opinion that the manufacturer ought to go on the road and sell without the assistance of the wholesaler. It was advisable however, so far as possible, to keep the good will of the wholesalers, but he did not intend to lie down and let his piles of lumber grow.

Mr. Carter agreed with this and added that, even with the assistance of the wholesaler they could not have prevented the present

conditions from developing. The wholesalers had not brought them about. The Americans had invaded the market so as to keep trade moving. Ontario manufacturers could meet the competition, and they had the advantage of being able to make quicker delivery. None of the United States stock would come in, if there were enough dry Ontario stock for the trade. Mr. Carter believed in keeping on as good terms as possible with the wholesalers.

Mr. Hocken said they had been sawing since January, and had made 3,500,000 feet of hemlock and they did not own to-day a quarter of a million feet, so close had they been selling to the saw.

Mr. Charles McGibbon, Penetanguishene, Ont., said that he did not see any sense in dropping prices, when nobody had any stock. No money could be made in selling at \$18.50. The stock produced was less than a few years ago and the country was growing, so that there would be no need to lower prices. For twelve-foot stock they could get \$20 to-day, direct from the saw.

Mr. Kitchener, Bracebridge, believed that until the new cut came on the market it would be hard to say what the prices would be. American hemlock prices were governed by Georgia pine, while Georgia pine was dependent upon the demand of the railroads. Possibly the railroads would be buying lumber again before the Ontario stocks were on the market.

Mr. Geo. Tennant, Bracebridge, said he expected to manufacture about two million feet this year and was not worrying about it as yet. If he could not sell it this year he could next year. He had already sold his No. 2 stock.

Mr. Hocken said he believed that the cut this year was not much different from last year. It might be about ten per cent. larger.

Nova Scotia Has Alleged Timberland Scandal

A sensational charge was made in the House of Assembly at Halifax on May 20th by Mr. C. E. Tanner, leader of the Opposition, based upon affidavits from Clarence Mills and Ernest Mills, of Annapolis, charging that the Attorney General, Hon. O. T. Daniels, had wrongfully obtained from them as members of A. D. Mills & Sons, Limited, a mortgage on 75,000 acres of lands and also a note for \$75,000. The point of the charge is, that the mortgage and the note are alleged to have been obtained in consideration of putting through a deal for the Mills' firm, to enable them to issue certain bonds for the purchase of timberlands from the Halifax and Southwestern Railway. The lands were to be joined with the Mills' timberlands in Annapolis and the whole sold to a syndicate. This sale was never effected and an action was begun by A. D. Mills & Sons, Limited, which was settled out of court. A lengthy debate upon the subject took place in the Assembly. The government supporters claimed that the transaction was an entirely proper one, made in the interests of the province.

Ontario Pulp Wood Sales

Hon. W. H. Hearst, Minister of Lands, Forests and Mines for Ontario, is advertising for tenders for the right to cut wood of various descriptions on a certain area tributary to the Frederickhouse and Abitibi Rivers in the district of Temiskaming. Tenders are being received up to June 8, and all bidders are required to state the amount they are prepared to pay as bonus, in addition to the ordinary Crown dues, including forty cents per cord for spruce and twenty cents per cord for other pulp woods, or such other rates as may from time to time be fixed by the Ontario Government, for the right to operate wood products mills on or near the area referred to. Tenderers will also be required to erect a mill on the territory and to convert the raw material into finished products and to deposit a check for ten per cent. of the amount of their tender.

Robert Dollar Building a New Vessel

The Robert Dollar Steamship Company of San Francisco, are having a new steamer built on the Clyde for service in the lumber carrying trade from ports on the Northern Pacific Coast. The name of the new vessel will be the "Harold Dollar." The vessel will have a capacity for handling more than 5,000,000 feet of lumber. The Dollar Line already has eight vessels in its fleet. The company intend to use several of these steamers in transporting the greater part of 24,000,000 feet of Douglas fir timbers from Vancouver Island to a port on the Atlantic Coast, whence they will be transhipped by rail to Toronto to be used in the Toronto harbor works. The "Harold Dollar" will be operated under British Registry, with Victoria, B.C., as her home port, as is the case with the other vessels of the fleet.

Dean Adams, of McGill University, states that the Federal Government have decided on an extension of the Forest Products Laboratories. The chemical department, in connection with the pulp industry, is to be enlarged, and housed in the Molson Building, University Street, Montreal.

A Trouble Saver for Retail Yards

This plan for saving trouble in handling retail stock is so simple that it seems almost ridiculous to send it in, but I have found it such a time and trouble saver that I do not see how any yard agent can do without it.

I have seen fir and spruce finish chucked into the shed without any supports or separations for widths or lengths, the result is a continued mix-up with a loss of time in getting what you want when a customer calls for it, to say nothing about the looks and bad conditions of stock.

With this rack it is a pleasure both to receive and to deliver spruce

1X6-12 FT.	1X5-12 FT.	1X4-12 FT.	1X3-12 FT.
1X6-14 FT.	1X5-14 FT.	1X4-14 FT.	1X3-14 FT.
1X6-16 FT.	1X5-16 FT.	1X4-16 FT.	1X3-16 FT.

finish, or fir either, especially the narrow pieces which I recommend it for.

The accompanying diagram will give an idea of the plan and it is so simple that a mere suggestion of it is sufficient.

Take a stall in the shed and build in the above divisions with 12-in. to 14-in. vertical space for each bin, or rack, and make the width to suit the desired number of pieces of the different widths, say four to six.

Have at least three frames so that the 12 ft. lengths will be supported and kept together in shape.—G. F. Mills, Wilkie, Sask.

Fitting Light Band Saws

As the light band saw is coming in use more each year, the small mill and factory owners are always on the lookout for a man that can put up a saw that will stand heavy feed and cut straight lines, says a writer in the Woodworker, Indianapolis. In tensioning, the lighter the saw the more difficult and particular it becomes. One must be very careful to have the saw level near the front edge. This is most essential, for when it is dished or lumpy it will not run well, be you ever so careful in other things. I tension 5-in. saws to a segment of a 21 to 25-ft. circle, and 7-in. saws to a 35 to 39-ft. circle, with a little more tension in front half of blade. I use both the drop and lift of blade in tensioning, mostly the lift when looking for small fast or loose places, being very careful to not get extreme fast or loose places near front edge. I also carry a little longer back in light gage saws, for the reason that they expand very quickly with slight heat, which is bound to occur when cutting pitchy or wet lumber.

A 21-gage saw with 17-gage swage will stand up better and last longer than a 22 or 23-gage with the same swage, so it is of benefit to both the operator and filer. Should the lumber be wet or pitchy, it is work for the filer; one can get along quite nicely if the lumber is dry. I have fitted saws 7-in. wide, 21-gage, 1-in. space, with 17-gage swage, tensioning as before stated, and had them stand up and cut 12-in. lumber, 120-ft. per minute, for ten hours, day after day. This is no "hot air," but one has to be very careful in the fitting.

After swaging, shaping and grinding, I use the side file as usual, then take a good sharp 8-in. file and side-dress the saw by hand to get the right bevel or undercut to the teeth. The side file only gives one bevel—straight with saw and down narrower toward base of tooth—but the side filing by hand, when properly done, gives the back bevel so essential in running thin or light saws. I do not use this method on 19-gage or heavier saws, as the ordinary side file is sufficient.

The reason so many fail in the care of light saws is, they will not take the trouble above mentioned. The side-dressing of a thin saw is very delicate work and one must have the best of light. If you have not, use an electric light, placed so it reflects on back of tooth, or, better still, make a holder so it can be fastened to the head, same as a miner's lamp; then you can see the points of the teeth very plainly. One can get along providing he does not care how slowly the saw cuts, but when he has several band mills to file for, each cutting a large

quantity of lumber, the saws must be put up so they will stand very heavy feed, for hours at a time.

In tensioning to a 35-ft. circle the saw will become somewhat wavy and will not lie flat on the bench, but with a weight on it one can level quite nicely. The main thing is to not roll very heavily or hard in any one place. Distribute the rolling well, thereby making the tension even, and the saws will not crack, providing the mill is in good shape. I do not want any reader to think I do not get any cracks, for I have had them and still get them when putting up saws to a high tension for cutting wet lumber; but the cutting of lumber is what the company wants, and gets.

A good machine, well kept up, is essential, also a good machine man. It is not every man that can properly run a pair of 21-gage band saws on a horizontal or vertical band mill, on very fast feed. Pitchy and wet lumber causes about the only trouble one should have with a good machine and a good man. We cut just as much when the lumber is dry, with the 21 and 22-gage saws, as with the 19-gage. As to strain, I use the same on the 21 and 22-gage saws as the 19-gage. Of course, they stretch out a little more, but the filer is paid to do the work, and if one wants to make a success in any line he must not be afraid of work.

I have tried $1\frac{3}{4}$, $1\frac{1}{2}$, $1\frac{1}{4}$ and 1-in. spacing on 7-in. saws, and where the lumber is knotty and not over 12-in. wide (pine), the 1-in. spacing has given best results. This is on 21 and 22-gage saws only. The teeth do not get broken and they stand more feed. This, of course, depends on the kind of lumber; I refer to pine such as is used in making boxes.

Many filers have only one band saw grinder and have to turn a saw to right hand or left hand, as the case may be, to sharpen it. This is very easy to do alone, as follows: Standing in front of saw, with the teeth toward you, raise saw (the upper half), placing both arms underneath. Grasp back of saw with the hands (hands being about 3-ft. or more apart) and twist back of saw downward and toward you. It only takes a slight twist to do this, at the same time stepping backward. The teeth hold to the floor and keep saw from slipping. When a step or two has been taken, hold up on saw a little or it will turn too quickly. After you have the twist started, the weight of saw will do the rest. This takes only a few feet of floor space and is better than putting saw against the wall or having some one else help you.

Mixing Woods in Mill Work

We have an unfortunate habit of mixing the products of many different logs at the saw mill in grading and sorting out lumber. This makes it a little difficult at times to get exact harmony in color and texture of wood to be used on a job. It seems to be necessary in the present order of things, however, to scatter the product of the log instead of keeping it intact, as is done sometimes in the older countries. But even if this is necessary it is not a good excuse for some of the mixtures to be seen both in mill work and furniture.

Quite recently a saw mill man told of going into a new office building to make a call, and while waiting in the reception room he fell to taking stock of the mill work in the room and he was astonished at the results. He found one door casing of plain white oak and one of quartered white oak. In the work running around the room he found various mixtures of plain white and red oak, and quartered oak and chestnut.

Now, some planing mill probably had the job of getting out all of this finish, and it is very likely that the finish in different rooms was uniform as to size and pattern. It is hard to conceive of a planing mill getting out, either purposely or carelessly, the kind of mixture this man said he found in one room, had the mill been making the work for just that one room.

However that may be, the lack of regard for consistency evidently started at the planing mill. If the order called for quartered-oak trim the mill should have made it all of quartered oak, or if it was plain oak it should have been plain, and some effort made to get oak that would harmonize in texture and figure. Somebody, somewhere along the line should have sorted through that stock so as to get for at least the majority of the rooms in the building stock so assembled that it would blend harmoniously.

The instance cited here is not by any means an isolated case, but it illustrates a fault all too common in the woodworking industry today. It begins with the saw mill mixing lumber indiscriminately. This may be unavoidable, but at the planing mill, furniture factory or wherever the lumber is used, a little effort would make it possible to get stock for each job that would come something near working together harmoniously. We should keep this in mind and remember that discrimination in woodworking does not stop at requiring a higher order of skill on the part of workmen, and the better class of machinery for doing the work. It also includes a consideration of the material used, so as to avoid ugly contrasts and patch work appearances, and to get an order of consistency and harmony out of the finished product.—The Woodworker, Indianapolis.

Fine Equipment in New B.C. Sawmill

Electric Drive and Modern Machinery in Plant of Campbell River Lumber Company at White Rock

The new sawmill plant erected last summer by the Campbell River Lumber Company, Limited, of White Rock, is entitled to rank as one of the leading mills of British Columbia. Several other plants have a larger daily output, but when it comes to the cost of taking the logs from the water and manufacturing the lumber ready for shipment, it is surpassed by none. The company consists of H. W. Hunter, president, who is the mill manager; F. G. Fox, vice-president, who is manager of the logging operations; T. A. Hunter, treasurer, who is sales manager, with office at 905 Dominion Building, Vancouver, B.C.

Following the destruction by fire of the company's sawmill at Hazelmore, B.C., about a year before, the construction of the new mill was commenced at White Rock, where now stands one of the most complete electrically-driven mills that there is in the country to-day. The mill was erected in record time, construction having begun on April 17, 1913, and the first board being sawn on August 17 of the same year. The work was done under the supervision of H. C. Winston, the company's present sawmill foreman, and D. E. Rice, architect and mill builder, of Vancouver, B.C. Early in September everything in and about the plant was in first-class shape, the output being 100,000 feet daily.

Description of the Plant

The sawmill, which spans the narrow channel of the Campbell River, is 50 x 215 feet, three storeys, each 12 feet in height, and has a cupola roof. A wing or addition on the west side is 84 x 144 feet. The log haul is at the south end of the mill, facing the bay, the channel of the river at that point having been dredged out to hold a good supply of logs. The mill equipment comprises machinery supplied principally by the Allis-Chalmers Manufacturing Company, together with Sumner Iron Works set works, Stetson-Ross ready sizer, Puget Sound Machinery Depot's mechanical spotter, and an eight-foot Mershon band re-saw. The head-saw is operated by twin engines and the remainder of the mill is driven by electrical motors. Space has been reserved on the mill floor for a heavy duty Wickes gang, which is to be installed in the near future, and when in place will increase the daily output between 35,000 and 40,000 feet. Timbers pass from the saws to two timber decks at the rear of the mill, one holding two car loads in lengths up to 24 feet; the other one car load of long lengths, 24 feet and up. The means provided for the automatic handling of the entire cut, and the small number of men employed on the floor, as compared with the average mill, are features which arrest the attention of every visitor to the plant. The clear lumber is taken off the transfer chains and loaded direct on dry kiln trucks, the stock passing from the dry kilns to the planing mill without re-handling. Defective stock is removed from the sorting chains, re-manufactured by a small edger and trimmer housed in a building close by, and again placed on the chains.

The filing room, in the third storey, is 50 x 50 feet in size, and has the latest Covel equipment, furnished by the E. C. Atkins Saw Company. F. W. Norberry is in charge of this department.

Adjoining the sawmill, and convenient to the sorting table, is the lath mill, the capacity of which is 25,000 pieces daily, or its equivalent in shingle bands, for which there is a brisk demand.

The engine room, repair shop, and quarters of the plant electrician and steam engineer, are located on the ground floor, to the front.

A Chandler & Taylor 14 x 18-in. twin engine, generating 280 horse power, receives steam through a 7-in. pipe from three Vancouver Engineering Works 60-in. x 16-ft. boilers, with Dutch oven feeds, which are installed in a separate power house protected by a fireproof wall on the mill side. Behind the Chandler & Taylor engine is the switchboard controlling the electrical equipment throughout the plant, all of which was put in place by Thomas Campbell, mill electrician. The steam plant is looked after by C. J. Moffat, engineer.

Wehn the type of dry kiln came up for settlement, the vote was all one way—North Coast. Two of these popular kilns were installed, their united capacity being 50,000 feet of lumber per day. They are giving absolute satisfaction, the stock being turned out in perfect condition. Steam is supplied from the boiler room, 250 feet distant.

Planing Mill a Roomy Structure

The main planing mill is 100 x 100 feet, two storeys, with cupola roof. The machines already installed comprise two S. A. Woods planers and matchers, American Woodworking Company sticker, rip-saw and re-saw. Space has been reserved for several other machines, which will be placed later in the season. All equipment is electrically driven.

Adjoining the planing mill to the west is the rough clear lumber shed, 50 x 150 feet in size. It is equipped with tracks to receive the platform cars, so that no piece handling of stock is required.

The shed for finished stock is located near the planing mill. The building is 40 x 200 feet in size, and is filled with select grades of lumber carefully bundled and placed on end. At the west end of the shed, mouldings are stored in racks. Twenty-four cars can be placed along the loading platforms at one time when necessary.

Fire Risk Reduced to Minimum

The company has made ample provision against serious loss by fire. Two large capacity Fairbanks-Morse steam pumps, located south of the engine room, are fed by a 5-in. steam pipe direct from the boilers. The pumps are connected with 8-in. water mains reaching all buildings as well as the piling yard for common lumber, hydrants being placed at suitable points with lengths of 2½-in. hose close by. In addition the main buildings have been equipped with automatic sprinkler systems, by means of which any blaze occurring night or day will be flooded by overhead pipes, an electrically-operated alarm gong at the same time announcing the point of attack. The sprinkler systems are fed from a 40,000 gallon tank erected on a hill west of the steam pumps, the elevation of 100 feet assuring a high pressure at all times. In connection with the above fire-fighting apparatus, the company has provided for a complete system of fire drill; that is, at least once a week the fire signal is given and a very practical fire drill is carried out, thus assuring the company that the employees thoroughly understand the handling of the fire-fighting apparatus. These safeguards, taken in connection with the fact that there is a clear space of 150 feet between the mill building, dry kilns and planing mill, undoubtedly reduce the fire risk to a fine point, and the underwriters have therefore granted the company a very low insurance rate.

The Motors and Their Work

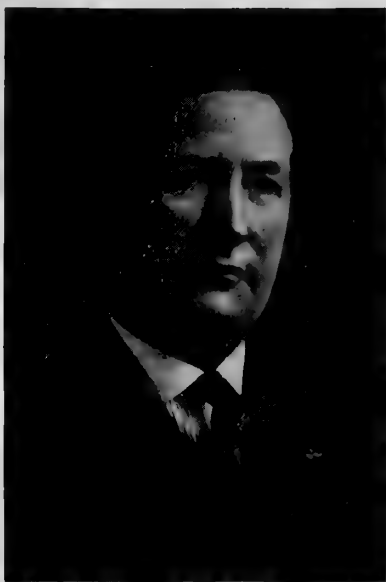
The motors installed throughout are Allis-Chalmers alternating



Plant of Campbell River Lumber Company, Limited, Semiahmoo Bay.



H. W. Hunter,
President and Secretary.



Frank G. Fox,
Vice-President.

current, 3-phase type, direct connected with three exceptions, the size and duty of those in the sawmill being as follows:—

- 65 h.p.—operating re-saw and live rolls.
- 50 h.p.—operating trimmer saw and live rolls.
- 50 h.p.—operating ready sizer machine.
- 30 h.p.—operating ready sizer fan (belted).
- 35 h.p.—operating lath mill equipment.
- 30 h.p.—operating cut-off saw and live rolls.
- 30 h.p.—operating two sets of live rolls.
- 20 h.p.—operating slab conveyor.
- 15 h.p.—operating turn table and sorting table.
- 15 h.p.—operating small edger and cut-off saw.
- 5 h.p.—operating blower for sawdust burner.
- 5 h.p.—operating filing room machinery.
- 75 h.p.—operating planer.
- 5 h.p.—operating two additional cut-off saws, belted.
- 75 h.p.—operating two planers.
- 75 h.p.—operating blower system, belted.
- 30 h.p.—operating sticker, re-saw and cut-off saw.
- 25 h.p.—operating turning lathe and conveyors, belted.
- 5 h.p.—operating grinding room equipment.

Some Interesting Notes

Part of the company's supply of fir and cedar logs comes from extensive limits at Crescent, not far from White Rock, where a camp of about fifty men operates both winter and summer. The logs are towed to the mill by the firm's gasoline tug, which can handle six or seven swifters in any ordinary weather. A second camp of about forty men is located on Little Valdez Island, about eighty miles up the Coast, the towing from which point is done under contract.

One of the factors instrumental in the selection of the Semiahmoo Bay site was the fact that the Great Northern main line from Vancouver to Seattle skirts the front of the reserve. A spur line capable of holding 25 or 30 cars was run into the mill property, from which

branch tracks extend to the timber decks, the planing mill, dry stock shed and piling yard. With a plentiful supply of cars at all times available for shipments north or south, backed by a mill that is equipped for the economical manufacturing of lumber, the company feels safe in asserting that its facilities are second to no other plant in British Columbia.

In addition to their output of lumber the Campbell River Lumber Company, Limited, has for several years been manufacturing shingles on a very large scale. They operate five shingle mills, located at the following points: White Rock, daily capacity 100,000; Melrose Spur, 60,000; Crescent, 60,000; Colebrook, 100,000; Cloverdale, 100,000. In their various operations a force of close on 300 men find steady and lucrative employment.

All the blowpipe work at the White Rock plant was done by the John K. Miller Company, Limited, of Vancouver. The contract was completed on time and the installation gave satisfaction from the starting of the fans.

Short ends from the planing mill machines are dropped into a car on the railway switch below, the fuel finding a ready market in Blaine. When a car is not in place, the short ends fall into a bin, which is emptied when a car is available.

The waste from the sawmill is consumed in the open, being deposited by conveyors at the back of a small hill, about 100 feet east of the mill. There is absolutely no danger of sparks being carried that distance, but a further safeguard is to be provided in the form of an iron shield along the mill side of the fire pit. At first the wet sawdust was deposited for burning with the slabs. This was found to be unsatisfactory, the sawdust filling the crevices and preventing free combustion. The difficulty was overcome by diverting the sawdust into a separate conveyor which empties over the discharge end of a pipe connected with a small fan, operated by a 5 h.p. motor. The plan solved the draft problem, and is recommended to all millmen who operate open burners.

Proposed Addition to Hardwood Rules

At the 17th Annual Convention of the National Hardwood Lumber Association which will be held at Buffalo, on June 18th and 19th a few additions will be proposed to the inspection rules. These additions have been recommended by the Inspection Rules Committee and are as follows:—

Plain sawn flitch lumber shall be graded according to the general rule applying to the kind of lumber inspected, with the exception that it must be measured on the narrow or sap side in the center of the piece between the wane or bark, and graded into any of the grades as No. 3 Common or Better, to which its quality entitles it. There is no restriction to heart in the grades of common. This rule does not apply to Veneer Flitch.

Wormy Beech shall be graded according to the rule for Beech No. 2 Common and Better, with the exception that pin worm holes shall not be considered a defect.

Annual Meeting of the Joseph Dixon Crucible Company

At the annual meeting of the stockholders of the Joseph Dixon Crucible Company, held at the company's main office in Jersey City, N.J., on Monday, April 20, 1914, the retiring Board of Directors, consisting of Geo. T. Smith, William Murray, George E. Long, Edward L. Young, William G. Bumsted, J. H. Schermerhorn and Harry Dailey, were unanimously re-elected. The meeting was attended by a large number of stockholders who expressed satisfaction with the present management and recorded the largest vote ever represented at an annual election, 9,628 out of a possible 10,000 shares being represented. The officers of the company, consisting of Geo. T. Smith, President; George E. Long, Vice-President; J. H. Schermerhorn, Treasurer; Harry Dailey, Secretary, and Albert Norris, Assistant Treasurer and Assistant Secretary, were also re-elected.

Barbados Market Report

S. P. Musson, Son & Company, Barbados, report under date of April 9th, as follows:—Lumberstuffs.—White pine—There have been no arrivals in this class of lumber during the fortnight, but dealers' have sufficient stocks on hand to last them for some time to come. Spruce—the Trn. Schr. "Rosalie Belliveau" arrived on the 4th inst., to our address with 221 m. ft. which we had sold to arrive at \$26.50 for merchantable. This vessel also brought 21 m. ft. spruce scantling which we sold at \$25.00 and \$23.00 according to specification. Pitch pine—No arrivals, but stocks are sufficient for present requirements. Shingles—No receipts of either Gaspe or cedar laying, but we understand a couple of cargoes of the latter are expected. Shooks—No arrivals. Wood hoops—Receipts consist of 500 bbls. by the S.S. "Tyne" imported by a dealer.



View of planing mill.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 7-tf

Wanted

One or two blocks of Spruce, also Pine. Must be well manufactured. Apply Box 31, Canada Lumberman, Toronto. 11-t.f.

Wanted

500,000 feet Hard Maple, 1½-in. to 4-in. Also 1-in. Basswood. Shipment Summer and Fall. Terms Cash. Box 32, Canada Lumberman, Toronto. 11-12

Wanted

1,000,000 ft. Spruce, 1-in., 1½-in. and 2-in. If not already cut will give sawing instructions. Apply Box 30, Canada Lumberman, Toronto. 11-t.f.

Shavings and Sawdust

Wanted to buy. Would prefer shavings baled and separate from the sawdust. Quote prices at your station.

M. BRENNEN & SONS,

7-12 Hamilton, Ont.

Wanted

Soft Elm, 4/4 log run.
Birch, 5/4 log run.
Quote lowest prices F.O.B. mill for dry or new cut.

E. M. NICHOLSON,

Board of Trade Building,

9-t.f. Montreal, Que.

Wanted To Buy—1000 Birch Logs

fresh, clean, straight and sound, 14-in. and up diameter at small end, 8 ft. to 16 ft. long. Delivery to commence as soon as possible. Terms: 75 per cent. cash when alongside track at railway station, balance when loaded on cars. Write P. O. Box No. 1595, Montreal, stating best price. t.f.

Wanted—Large Quantities

1-in. x 5-in. and up No. 1 White Pine Mill Culls.
1½-in. x 5-in. and up No. 1 White Pine Mill Culls.

1½-in. and 1½-in. C. & B. White Pine.
Quote prices and state amount for sale. Box 29, Canada Lumberman, Toronto. 11-12

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

For Sale-Lumber

For Sale

Quantity of first-class cheese box veneer.

G. R. JONES,

10-12 Eldorado, Ont.

For Sale

5,000 Cedar fence posts, 5-in. and up diameter and 8 ft. long. Average 6½ in. diameter. Grand lot at a bargain. Apply M. C. Neate Lumber Company, Cummings Bridge, Ont. 11

For Sale

200 M. ft. Hemlock, 1-in. and 2-in., all sizes and lengths.
70 M. ft. Hard Maple axles, dry Prime stock
50 M. ft. Soft Elm, 1-in.
25 M. ft. Soft Elm, 2-in.
25 M. ft. Soft Elm, 3-in.

Box 33, Canada Lumberman, Toronto. 11-12

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale

2 cars 3 x 4 to 7-in. Sound Maple Hearts.
2 cars 4¼ x 5½ Sound Boxed Maple Hearts
1 car 2½ in. Soft Elm, No. 1 C. & B.
1 car 2-in. Birch, No. 2 C. & B.
4 cars 1½-in. Beech, No. 2 C. & B.
5 cars 1½ in. Maple, No. 2 C. & B.
Dry stock. Immediate shipment.

Pedwell Hardwood Lumber Co.,

9-t.f. 6 St. Ann's Road,
Toronto, Ont.

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,

1-t.f. Janesville, Wisconsin.

For Sale-Machinery

For Sale—Cheap

1 Pony Planer, McGregor & Gourlay, 24-in., in good running condition.
1 Iron Saw Table 3 ft. x 5 ft., Ballantyne Tilting Guide.

Box 28, Canada Lumberman, Toronto. 11-13

WOODWORKING MACHINERY FOR SALE—1 40-in. MacGregor-Gourlay pedestal band saw. 1 Cowan roller top cut-off sawtable. 1 Canada Machinery Corporation dimension saw table. 1 24-in. Champion Planer, matcher and moulder. 1 36-in. Egan double drum sander. 1 8-in. three side moulder. 1 Cowan Double head panel raiser. 21 Cowan Veneer Press Screws. H. W. Petrie, Limited, Toronto. 11

Second Hand Machinery

150 to 175 h.p. Corliss Engine, 16-in. x 36-in., new two years ago.
75 to 100 h.p. Brown Automatic, 13-in. x 30-in., in excellent condition.
500 to 750 h.p. Buckeye; a good sawmill engine.

Boilers, 72-in. x 18-ft. and 54-in. x 14-ft.

THOMAS HOBBS,

Mail Building,

7-t.f. Toronto, Ont.

For Sale

Twenty-three ton Manhattan Yard Locomotive, ten cars and rails. Apply to

E. R. C. CLARKSON & SONS,

15 Wellington Street West,
Toronto, Ont.

11

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Saw filer, band or circular, wants position. 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 9-12

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

WANTED—Lumber Traveller for Ontario. Would prefer young man with experience. Reply confidential. Box 5, Canada Lumberman, Toronto. 8-11

WANTED—Salesman calling on the lumber trade and contractors in the Eastern Provinces, to handle Dr. J. M. Stewart's Veterinary Remedies as side line.

Palmer Medical Company, Ltd.,

10-t.f. Windsor, Ont.

Business Chances

Wanted

A thoroughly practical man with some capital to invest, capable of taking entire charge of sawmill and logging operations with a well established and successful firm owning limits containing 12 years' cut. Have a cut of three million this year. An exceptional opportunity for the right man. Owners wish to retire from active part of this end of the business. Write Box 18, Canada Lumberman and Woodworker, Toronto, Ont. 10-11

Business Opportunity

For Sale—Woodworking shop fitted especially for general work. New and up-to-date machinery. First class dry kiln. Blower system. Railway siding. Situated in a live and thriving Ontario town. Splendid local and shipping trade. This is an exceptional opportunity to acquire a good business with a trade already established.

Write J. A. C., Canada Lumberman, Toronto. 10-12

For Sale

Complete sawmill outfit. Machinery practically new. Capacity 20 M. Two boilers 60 and 40 h.p., with cold blast grates, endless log chain, 8-in. steam feed; 3 block carriage with boss dogs; friction canter and sweep; 3 saw edger; 2 saw trimmers and a full complement of saws and belting. Also Long Mfg. Co. lath mill in first class condition will be sold with sawmill or separately. Mill near White Hall, Ont. Apply to Box 41, Jordan Harbor, Ont. 11-14

British Columbia Saw Mill and Timber Limit For Sale

A 25-thousand feet capacity Saw Mill, and 90 million feet first class Spruce, Red Cedar, Hemlock and Yellow Cedar, etc., under B. C. Special License. At good shipping point near Prince Rupert, B.C. Inspection invited. A. Cuthbert, P. O. Box 456, Prince Rupert, B.C. 6-11

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. t.f

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

For Sale

The best timber berth in Alberta, containing approximately one hundred million feet, four-fifths of which is splendid spruce. A railroad will pass within one mile of the limit this summer. The situation makes it an exceedingly easy limit to operate. Price \$2.00 per M., easy terms. On account of its close proximity to the prairie markets and easy logging, this is cheaper than B. C. timber for nothing. For further information apply to Box 25, Canada Lumberman, Toronto. 11-14



Timber Sale

Tenders will be received by the undersigned up to noon of the 6th day of July, 1914, for the right to cut the Red and White Pine timber on Berths 1 B, 1 C, and 1 D, in the Mississauga Forest Reserve tributary to the north shore of Lake Huron, each Berth containing an area of 36 square miles, more or less.

For maps and conditions of sale apply to the undersigned or the Crown Timber Agents at Thessalon, Sault Ste. Marie, Webbwood and Sudbury.

W. H. HEARST,

Minister of Lands, Forests and Mines.
Toronto, April 18th, 1914.

N.B.—No unauthorized publication of this notice will be paid for. 9-13



Tenders for Wood Limit

Tenders will be received by the undersigned up to and including Monday, the 8th day of June, 1914, for the right to cut wood of various descriptions on a certain area tributary to the Fredericshouse and Abitibi Rivers in the District of Temiskaming.

Tenderers shall state the amount they are prepared to pay as bonus in addition to the ordinary Crown dues, including 40c per cord for spruce and 20c per cord for other pulpwoods, or such other rates as may from time to time be fixed by the Lieutenant-Governor in Council for the right to operate wood products mills on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory, and to manufacture the wood into products thereof in the Province of Ontario.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario for ten per cent. of the amount of their tender, to be forfeited in the event of their not entering into an agreement to carry out the conditions, etc.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines.
Toronto, Ont., April 24th, 1914. 10-11

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

**Timber Sale**

Tenders will be received by the undersigned up to noon of the 15th day of July, 1914, for the right to cut the Red and White Pine timber on berths 1, 2 and 3, Township of Blyth, in the District of Nipissing.

For maps and conditions of sale apply to the undersigned, or the Crown Timber Agents at Sudbury and North Bay.

W. H. HEARST,

Minister of Lands, Forests and Mines.
Toronto, May 4th, 1914.

N.B. No unauthorized publication of this notice will be paid for. 10-13

**Sale of Pine Timber on Metagami Indian Reserve**

Tenders will be received by the undersigned up to and including the 8th day of July next for the right to cut the Red, White and Jack Pine timber over eight inches in diameter on the Metagami Indian Reserve, situate on the Metagami River in the District of Sudbury. For particulars, descriptions, conditions, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines.
Department of Lands, Forests and Mines,
Toronto, May 2nd, 1914.

No unauthorized publication of this notice will be paid for. 10-13

**Tenders for Allan Water River Wood Limit**

Tenders will be received by the undersigned up to and including Wednesday, the 15th of July next for the right to cut ties from Spruce, Balsam, Banksian or Jack Pine, Poplar and Whitewood trees seven inches and upwards in diameter two feet from the ground sufficient to supply a tie preserving plant for a period of twenty-one years from unoccupied, unsold and unlocated lands of the Crown tributary to what is known as the Allan Water River, tributary to the Grand Trunk Pacific Railway in the District of Thunder Bay.

Tenderers shall state the amount they are prepared to pay as bonus in addition to the Crown dues of \$2 per thousand feet board measure for anything not manufactured into ties, and for ties at the rate of 5c each, or such other rates as may from time to time be fixed by the Lieutenant-Governor in Council.

Such tenderers shall be required to erect within the limits of the territory covered by the right to cut ties, or at some other place approved by the Lieutenant-Governor in Council a tie preserving plant.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario for \$25,000, to remain on deposit as security for the carrying out of the conditions of their tender.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines.
Toronto, Ont., April 27th, 1914. 10-13

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

For Sale

Modern, up-to-date Band Sawmill, new Waterous machinery, capacity 65,000 ft. per day. Apply to

E. R. C. CLARKSON & SONS,

15 Wellington Street West,
Toronto, Ont.

**Saw Mill Machinery For Sale**

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Ladder, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company,
22-t.f. Brantford, Canada.

"Where Have My Profits Gone?"

That is the question that some owners in almost every line of business have to ask themselves at the close of many a year's work. The answer is not always easy. Often many factors must be taken into consideration before the true answer is found.

The extra cost caused by lack of system and up-to-date manufacturing methods is enough in many instances to entirely wipe out profits and that is exactly what has resulted in many cases. Some years turn out a profit even under the heavy handicap of poor equipment and no system, but those years are exceptional.

If it is true that the small mills of the country are becoming smaller and the big mills bigger, it is undoubtedly due, in large proportion, to the fact that the big mills in general have the most improved equipment while the small mill gets along as best it can with the equipment installed ten or more years ago. Many of those small mills that are running old equipment are—dying a slow death.

The main argument given by small mills that have not changed their ways to correspond with changed conditions is that their old equipment will take care of all the business they are getting.

That is very true but it is also true that such concerns are not getting nearly as much business as they could and would if they were equipped to go after business on a competitive basis, both as regards quality and price.

The Piling of Timber

After nature has done her part in growing good timber, and the sawyer has attended properly to his duties and has cut timber of

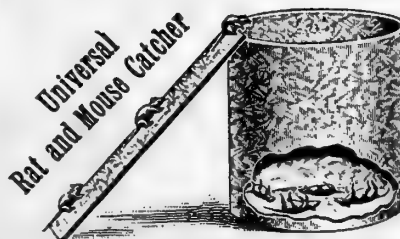
even thickness and with few defects, there yet remains an important work which cannot be slighted without doing damage which may offset the efforts of both the sawyer and nature. The timber should be well piled when it is put on the sticks to season. That is a step which must be attended to with care. It is as important as the sawing. The foundation should be firm and true to start with. If it is lopsided, sunken in one part, or raised too high in another, the timber will bend to fit the foundation, and will dry that way. After it has once set in that form it cannot be straightened, and its value is lessened. Sometimes a foundation is true at first, but when the load is placed on it one part, being on softer ground, sinks and the whole pile is distorted. No matter how carefully the piling is otherwise done, the timber will not dry true if the foundation is uneven.

**BAUGHMAN'S
BUYER AND SELLER
Special Price, \$1.00
Canada Lumberman - Toronto**



**Montreal Engineering Co.,
Limited,
164 St. James Street,
Montreal.**

**Timber limits examined,
cruised and surveyed.
Waterpowers developed.
Pulp and Paper Mills designed and constructed.
Projects financed.**



Cleans a building of Rats and Mice in short time, keeps it cleaned, for it is always ready for use. Made of galvanized iron, can't get out of order, lasts for years. Large number can be caught daily. Go to Catcher mornings, remove device inside, which only takes few seconds, take out dead rats and mice, replace device, it is ready for another catch. Small piece cheese is used, doing away with poisons. Catcher is 18 inches high, 10 inches diameter. When rats pass device they die, no marks left on them. Catcher is always clean. One of these Catchers set in a livery stable in Scranton, Pa., caught over 100 rats in a month. One sent prepaid to any place in Canada or United States upon receipt of \$3. Catcher, 8 in. high, for mice only, prepaid \$1. On account of shipping charges being prepaid, remittance is requested with order.

H. D. SWARTS,
Inventor and Manufacturer, Scranton, Pa.

**Mr. Roofing Dealer
—Read what Johns-Manville Roofing Service Does for YOU.**

It gives you the exclusive sale in your town of J-M Asbestos Roofing and J-M Regal Roofing. That means NO COMPETITION, for the reason that they stand in a class by themselves and you don't have to sacrifice profits by cutting prices.

J-M Asbestos Roofing, made of alternate layers of pure Asbestos and genuine Trinidad Lake Asphalt, is the standard acid-proof, no-paint, no-repair roofing that gives perfect fire protection.

J-M Regal Roofing is the highest type of rubber roofing; not to be confused with low-grade, short-service roofings.

These roofings are widely advertised, favorably known everywhere, and in steady demand.

Another thing, you don't need to carry much stock. Our Branch house near you does that. Whenever you run low, just order from them and they'll ship immediately.

**Now Read what
Johns-Manville
Service Does for
YOUR
CUSTOMERS**

Johns-Manville Service gives your customers the world's standard roofings manufactured by a five-million-dollar concern, with more than fifty years' experience in the study and solution of roofing problems. It also gives them the benefit of helpful suggestions and a cheerful willingness to make right anything that goes wrong.

Break Away from Cut-Throat Competition and Become a J-M Exclusive Dealer.

Do it NOW. Write our Branch nearest you TO-DAY and get our Special Dealer Proposition. Some progressive dealer in your town will get the benefit of J-M Roofing Quality, Service and Advertising — WHY NOT YOU?

**THE CANADIAN
H. W. JOHNS-MANVILLE CO.
LIMITED**

Manufacturers of
Pipe Coverings; Packings;
Brake Lining; Boiler Preservative; Fire Extinguishers; Cold Water Paint, etc.

Toronto

Montreal



Winnipeg

Vancouver

Review of Current Trade Conditions

Ontario

It is still impossible to report any important change in the lumber trade situation in Ontario. Manufacturers and wholesalers are finding trade very quiet. Retailers in a number of quarters however, report a very fair volume of business, and they account for the quietness in the wholesale trade by the fact that many of the retail yards are carrying well assorted stocks and are purchasing only for immediate requirements, in order to keep stocks assorted. Shingles are quiet, but there is a good demand for lath, of which stocks are light. Reports from manufacturing points continue to be more reassuring in regard to the drives and the indications now point to most of the logs coming out, and a fairly normal cut resulting. Much anxiety has been felt on account of bush fires during the past fortnight, but it is reported that the rains of the last week relieved this situation largely.

In Toronto, retailers report trade considerably improved. Many retailers have all the trade they can handle and some are crowded to their capacity with orders. Some complaint is heard of price cutting, but the opinion is fairly general that there is no necessity whatever for such a course.

No alteration in prices or trade conditions is reported from Ottawa. Trade is fair, but not nearly so good as lumbermen would like. A good demand continues for the low grades, but the export business is dull. Some indications are noticed however, which point to improvement in the trade with Great Britain.

Eastern Canada

A slight reduction in the volume of business is reported from Montreal and some of the wholesalers are inclined to think that trade will make a poor showing this year as compared with last. Others however, are not of the same opinion and are looking for a revival of moderate business activity in the near future. Stocks of lumber in retailers' hands are low. Low grade southern pine continues to enter the Montreal market extensively at very low prices. In the dimension timber trade, competition is keen and the volume of business is less extensive than it was recently. Restricted driving operations and the results of forest fires are expected to reduce the amount of this year's production to some extent. Export business in pine is very slow, but a fair amount of birch is going forward.

No change in market conditions is reported from St. John. There is a fair local demand, but no increased business is expected at present. Many plans for house building have been withdrawn on account of scarcity of money, and there are no large contracts in view. Portable mills are offering lower prices for local trade than those which have been prevailing. Reports from most of the important drives indicate that they are being got out satisfactorily. The trade with the United States is very dull. It is, if anything, even quieter than it was a month ago. The English market also continues quiet, although there are signs of improvement. There is only a fair demand for shingles.

Eastern spruce manufacturers have not yet found a good market in the New England States. Some improvement is noticed but the trade in general is below normal. Reports from New York, state that stocks of spruce in the yards are fairly well assorted and that there is some improvement in the yard enquiries. At Boston there is a better demand for eastern spruce, production, however, has increased considerably. The base price remains at \$25. Occasional sales are reported at \$24.50, as a result of sharing the commission. There is a good trade in random. Frames are moving freely at a good profit. Prices are about as follows:—2 x 3, \$21 to \$21.50; 2 x 4, \$22.50; 2 x 5, 2 x 6 and 2 x 7, \$20.50 to \$21; 2 x 8, \$23; 2 x 10, and 2 x 12, \$24 to \$25. Spruce covering boards have brought as high as \$22.50. Lath are firm at Boston, some dealers refusing to take less than \$4.25 for 1½-in. The demand is taking care of nearly everything that offers. Good 1½-in. lath are selling easily at \$3.90, while \$3.80 is obtained for ordinary 1½-in. lath. Continued improvement is reported in the demand for shingles, the best extras bringing \$3.65. Clears are selling at \$3 to \$3.20 and 2nd clears at \$2.75 to \$2.90. The best red cedars are bringing \$3.75.

Great Britain

The timber trade at London continues quiet. Most of the large consuming factors are fairly active, with the exception of the contract building demand, which is still demoralized by labor disputes. Values continue steady. Stocks of last year's goods which are in steady demand are growing very scarce and there is an active de-

mand for scantling, sizes and floorings, particularly for the smaller class of houses. Freights are still easy for immediate shipment, but for later dates, owners are asking advances. At Foy Morgan & Company's recent auction sale 2nd Quebec spruce 3 x 9, 12 ft., was sold at £12 and £11 5s. Fourths brought £10 15s with £10 5s for 10 ft. and 11 ft. lengths. First Quebec, 3 x 7, 9 to 14 ft., brought £14. Seconds brought £10 and £9 15s. First Quebec pine, 3 x 11, 11 to 13 ft., sold for £29. Dry 2nd Quebec pine 3 x 10, 10 to 16 ft., brought £19 15s. Prime Quebec birch, 3 x 6/11-in., 6 to 16 ft., sold at 1s 6d per cubic foot.

At Liverpool, stocks of nearly all the leading lines are heavier than they were a year ago, and are quite sufficient for the volume of trade. The consumption shows a decrease, with one or two exceptions. The Timber Trades Journal in its issue of May 9th, referring to the opening of the spruce season says:—"Business is not quite as brisk as is usual at this time of the year. There appears to be a fair amount offering, but with the uncertainty about the freight market, buyers are not too eager to contract far ahead. Their experience up to the present time has not been over-encouraging, and the prospects of any advance in freights are too remote to make them particularly anxious to come in at to-day's figures, which, on the face of things, can be said to be reasonable enough. Apart from this there appears to be a complete lack of confidence amongst the consumers, and it is generally admitted that this year, a less number of sales have been made to arrive than has been the case for a number of years. We are now on the eve of the commencement of the season, and there are several cargoes loading, or will be on passage, and from all accounts there is a very small proportion of these sold."

Referring to the market for birch, the same journal says:—"There is not a great deal of business being done on c.i.f. terms for either logs or planks, and for what little is being transacted values are maintained—that is, of course, f.o.b. values; for naturally c.i.f. values are slightly down on account of the decline in freights. Spot values are in sympathy with c.i.f. values, and as there is a fairly steady demand all round, and the consumption at present is in excess of the import, stocks have become gradually reduced. Offers to arrive are being made with a little more freedom lately, but for these, figures are fairly well maintained, especially for the higher grades."

United States

Irregular conditions continue in the United States lumber trade, and in fact in practically all kinds of trade. The chief complaint is lack of demand. Apparently the supply of money is plentiful, but there is a general lack of confidence when a question of investing money in new enterprises or extension of old ones, is brought up. Uneasiness continues in regard to the attitude of the government at Washington, business men still fearing that the government has not yet finished its interference with big business interests. It is felt also, that so soon as the government shows a disposition to change its policy in this regard, an important improvement will develop. Fundamental business conditions are generally considered to be quite sound. Latest government estimates of the winter wheat crops are the best on record. Agricultural conditions were never better than at present. The big industries, however, are marking time and speculation is at a low ebb.

In the lumber trade everyone admits his inability to see very far into the future. Buying has been restricted entirely to current requirements. Speculative buying has disappeared. Stocks in dealers' yards and in consumers' piles are low, and any increase in demand would immediately stimulate trade, resulting probably in quite a rush for stocks. Railroads are still out of the market, but there is a fair amount of activity in connection with the building trade. Southern pine conditions show no change. The northern pine trade is quiet, but prices are steady. The demand in the larger towns and cities shows expansion, but the country yards seem to be doing very little business.

Northern hemlock manufacturers report an increase in the number of orders. Prices are still below those of last year, but mill men look for improvements in the near future. The hardwood market is lacking in vigor, but prices are holding very satisfactorily. Consumers are doing very little buying and are using up any reserve stock they possess. The demand from the implement and vehicle trade is fairly good. Export hardwood business is increasing slowly.

At Manchester, the timber trade is very much of a "hand-to-mouth" character and prices are low. Monthly stock sheets, however, are showing a little better state of affairs. Spruce deals are in

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

BEAR IN MIND

That we saw the year round and always have large stocks of

Norway and White
== Pine Lumber ==

Large timbers cut to order, any length up to 60 feet, from Pine and B.C. Fir.

Headquarters for Norway Silo Stock.

poor demand. Prices of yarded stock have been lowered in order to find buyers. With 3 x 7 in. as a basis, the present value is £10 to £10 5s ex stocks. The stock amounts to nearly 10,000 standards, which is very heavy for this time of year.

At Glasgow, there has been some improvement of late in the demand for Canadian white pine goods. Fairly good sales are reported, of late, in waney boardwood, first pine deals and sidings and also in the lower grades. Stocks in general are moderate, with the

exception of first quality waney logs. Spruce deals are moving slowly, but stocks remaining on hand are light.

Direct shipments of paper and pulp from Newfoundland to Manchester are increasing year by year. In 1913 the growth of the industry broke all records and it is anticipated that by June, 1914, the total export will be of the value of £850,000. The total which reached the United Kingdom in the last fiscal year was paper valued at £400,000 and pulp at £70,000.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

St. John Trade Quiet—Drives Coming Out Well

St. John, N.B., May 19th (Special to the Canada Lumberman): The market conditions at St. John remain unchanged, since the last writing. The demand for lumber locally is only fair, and no increase of business is looked for at this time. The house building trade is moving along slowly. While a fair amount of building is going on, many plans have been withdrawn on account of the people being unable to find the money to carry on the work. There are no large contracts in view at the present time, the largest being about a \$50,000 contract to build a sanatorium near Courtenay Bay. Prices in many cases for local work are being shaded; and it looks as if they will go lower instead of higher. Many bargains are now being offered by the portable mills, which are shipping their winters cuts of lumber to market. There are large quantities of these stocks, and as the portables make a large amount of refuse, or second quality stock and are not finding a ready market, they are forced to sell cheaply.

During the past two weeks the water has risen higher than for twenty-seven years, and some of the mills were forced to remain idle for a few days, but the water is now receding fast owing to extremely dry and cold weather. If rain had fallen during the past ten days a tremendous freshet would have occurred and much damage would have been done along the river. All the drives on the St. John are coming along in good shape. Of course there are always a few logs left. On the Salmon river, Grand Lake, Messrs. King & Sayre are both out with their drives in record time. On the Tobique river, Messrs. Miller & Fraser are out, and practically all of Messrs. Stetson, Cutler & Company's logs are out with the exception of about two million which it was said they were forced to leave on the Nectau, a branch of the Tobique, caused by a dam blowing out. On the head waters of the St. John, the drives are coming well. On the Nashwaak, the Partington Pulp Company are about out, but the streams are now beginning to dry up, and unless rain comes soon some logs which are now fairly safe may be left.

Prices of bank logs at Springhill have been very high, the buyers in some cases paying \$15 per M. for logs and \$11 per M. for battens and inferior logs. This will make the logs cost from 75c to \$1.00 per M. more when delivered to St. John, which makes them practically unprofitable.

Very little business of any kind can be had from the American market, which shows no improvement. In fact if anything it is harder to sell than a month ago. Narrow random has been sold as low as \$18.50 per M. delivered New York. Laths are the only stock for which a steady demand has taken place both in New York and Philadelphia. Prices can be said to range from \$2.90 to \$3.00 per M. on wharves at St. John.

The English market also remains quiet, although perhaps in a somewhat stronger position than a month ago. A seller who had deals to offer at present would find it hard to dispose of them at a price that would leave any profit on the cost of material. Dry pine seems to be the only kind of lumber in demand on the market at the present time and very little of this stock can be had here. Prices are firm.

Shingles are only in fair demand, both for shipment and locally. The British Columbia shingle is to-day being sold in St. John as cheap as the local manufactured article.

The trade in box shooks is quiet and orders are coming in slowly.

Bush Fires Make Ottawa Firms Anxious

Ottawa, May 23rd (Special to the Canada Lumberman): About the most serious matter that has concerned the lumberman in the Ottawa Valley and Gatineau districts during the past week has been the bush fires that have been raging. Though no very serious damage has been done to the limits containing merchantable timber, this has been due to the efforts of large gangs of fire fighters. On Thursday of this week reports came from Maniwaki, Que., that the village and

valuable timber limits nearby were in danger of being wiped out. At the time of writing, rain is falling heavily in the Algonquin Park district and north of North Bay and is coming towards Ottawa. The fact that the wind kept down all week prevented serious results from the bush fires. One of the most disastrous fires of the week was at Portage du Fort, Que., a lumber village on the Ottawa, 50 miles above the Capital. The whole of the business section was completely destroyed, entailing a loss of \$140,000, against which there was \$51,000 only of insurance.

Owing to the prolonged period of dry weather the water is exceptionally low in the Ottawa and other rivers and streams in this section of the country. If rain does not come soon in substantial quantities, operations in the saw mills will be seriously handicapped and consequently this year's cut will be affected. In the small streams the logs are piling up through the scarcity of water. It is several years since the water in the Ottawa was as low at this time of the year as it is just now, but this is partly because the conservation dam at Lake Kippewa has not yet been opened this season. The dam was put into operation for the first time last summer. The reserves in Lakes Kippewa and Temiskaming are rapidly filling up and as soon as water is required in the lower Ottawa the dams will be opened.

Local trade is fair, but not so good as the lumbermen would like. There has been no alteration in prices for several weeks nor is there likely to be for some time to come. The demand for low grades, such as spruce and mill culls continues fair. Export business is dull, but there are signs that it will improve for some English buyers have been making inquiries recently. The commercial world, of which the lumber industry is an important unit, has not yet recovered from the financial depression of last year.

Conflicting Views Upon Montreal Trade

Montreal, May 23rd (Special to the Canada Lumberman): Business is only moderate, and has eased off a little lately. Some of the wholesalers take a decidedly pessimistic view of future trade, and look for a falling off in the turnover as compared with last year. They base their opinions on general commercial conditions, and so far as the local situation is concerned, on a reduction in the building programme. As showing the character of the great majority of the buildings going up, recently, permits were taken out in one day for \$240,000 for residences. These gloomy views of conditions are not shared by other wholesalers, who are satisfied that there will be a revival, although they do not expect anything in the shape of a boom. Stocks in retailers' hands are stated to be low, and this is undoubtedly a favorable factor.

A large amount of poor grade American pine is still coming into the market and is selling at comparatively low prices.

There is keen competition in the dimension timber trade, and although some good orders have lately been placed here, business has slackened materially.

The dry weather has restricted driving operations in the province of Quebec, and a considerable quantity of logs which could not be floated down, owing to the low water conditions, has been burned in the forest fires which have prevailed. These two factors will mean an appreciable diminution in the cut.

The export business is still very slow. A fair amount of birch timber is going forward, but very little pine.

Ground wood prices in the United States have declined—and are now down to the lowest point for a year. This has naturally had an effect on Canadian quotations. Contrary to expectations, the water conditions over the border are very satisfactory, and consequently, few orders are coming to Canada.

There are fair stocks of chemical pulp on hand, and trade is quiet. The Secretary of the Scandinavian Pulp Association has been on a visit to United States and Canadian mills.

News print is in good request. The Laurentide Company state

SATISFACTION FOR SALE

OUR Lumber is manufactured with a Purpose. From the Stump to the Finished Product this Purpose is never forgotten. We aim to make our Products and Satisfaction synonymous. We want every car we ship to be filled not only with Lumber but with Satisfaction.

We are equipped to give you uniform grades—dry stock—fine planing mill work—good service and courteous treatment.

When buying of us, your worry, your anxiety, is over with the placing of the order. You know you will get what you want—in the way you want it—that upon arrival, you will be pleased. It will make your business a source of pleasure and happiness.

Try Fenderson Service During 1914

Begin Now. Address:

John Fenderson & Co.

Incorporated

Sales Office

**27 Besse Place
Springfield, Mass.**

MILLS AT

**Sayabec, Que. Cedar Hall, Que.
Salmon Lake, Que. St. Moise, Que.
Jacquet River, N. B.**

**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

that in consequence of the increasing demand, the price of news print has advanced.

London Market Looking More Settled

Churchill & Sim, London, England, in their quarterly wood circular, under date of May 4th, say: The deliveries for the first four months of the year are about 1,300 standards in excess of the total quantity delivered up to the end of April, 1913, the progressive nature of the improvement having been checked by the Easter holidays, and owing to the fact that in spite of much negotiation, no settlement has been arrived at between the master builders and their workmen in the London district. The general importation for the month has been smaller than usual, and the available stock is now in more moderate compass, battens, and scantlings especially, having been much wanted. In spite of some pessimistic forecasts, the market ahead looks more settled than for some time past. The buying has been less wholesale and consequently less speculative. Importers have been moving more cautiously than usual throughout the season, but as the large stocks in the country at the end of last year are becoming gradually absorbed, stocknotes are being depleted without reduction in values. Freights have proved no hindrance to business, but there has been no further decline in rates during the month.

The stock of timber, deals, etc., at the public docks on the first of May included the following:—

	1914.	1913.	1912.	1911.
Colonial pine deals and battens in pieces	485,000	367,000	324,000	409,000
Red pine	19,000	20,000	43,000	55,000
Spruce ditto	689,000	427,000	429,000	470,000
Oak timber				34
Oak planks, etc. (American) ..	3,890	1,493	2,207	1,396
Birch timber	257	179	190	165
Birch planks	4,524	3,738	3,373	2,060
Elm timber	1,794	247	328	721
Ash	40			
Yellow pine timber	896	758	254	131

No importations were reported from the St. Lawrence. From New Brunswick, importations were as follows:—

Pine deals ... 3,000 pieces	against	Nil pieces in 1913
Spruce deals .. 74,000 pieces	against	141,000 pieces in 1913
Birch planks . 156,000 pieces	against	149,000 pieces in 1913

Large parcels of birch planks have arrived, but prices are well maintained. A few spruce deals came to hand during April, and although the stock in London is ample, prices are inclined to harden, and there is some competition to acquire good parcels at the current rates. There was no movement in pine deals, the deliveries being very small, and prices are unaltered except for very prime lots, which are unaffected by the general quotations, and command very high values which must tend towards the seeking after substitutes.

British Columbian and Oregon pine.—The lower prices have attracted some demand, but the stock is still too large and has been increased by the arrival of a sailing cargo. This timber, mostly of long lengths which cannot be produced from the pitch pine ports, is gradually forcing its way to the front, and its present cheapness is tending towards its more general use by contractors.

Liverpool Trade Still Quiet

In their monthly wood circular, under date of May 1st, Messrs. Farnworth & Jardine, Liverpool, Eng., report as follows:

The business of the past month was again of a quiet character. The arrivals all round were fairly moderate, but with inactive demand the deliveries were disappointing, being in the aggregate some 12½ per cent. less than corresponding month a year ago. Stocks of several leading articles are still too heavy, but values generally have been fairly maintained. For ocean deal freights, chartering has been dull.

Canadian woods. Pine timber.—The market shows no change. Waney pine, 1st Class.—No arrivals; the consumption has been very limited; the demand is dull but stocks are reasonable and prices firm. 2nd Class is little enquired for and stocks are sufficient. Red pine.—No movement to report. Oak.—There has been a slight reduction in Manchester stocks. Some railway orders have been placed during the past month but otherwise the demand is restricted; stocks are light but prices are rather easier. Elm.—There has been no import of square wood; values are steady and stocks are not excessive; a few parcels of round wood have arrived via Portland, Me. Pine deals.—A small import to Manchester; the demand is not brisk and consumption has been disappointing; stocks are rather heavy; values unchanged. Red pine deals.—No change.

New Brunswick and Nova Scotia spruce and pine deals.—The import during April to the Mersey (including Manchester), amounted to 2,530 stds., against 3,790 stds. the corresponding month last year, 76 per cent. being to Liverpool. The consumption has been only fair, and stocks are still too heavy; liner shipments from Halifax, N.S. and St. John, N.B., have been sold at low rates. For the better class stocks, in cargo shipments, prices remain fairly steady, but sales are difficult. Pine deals are in fair demand.

Birch.—Logs.—There has been an import of 32,000 cubic feet, chiefly from St. John, N.B. The consumption has barely kept pace, but stocks are moderate. Values firm. Planks.—The import has been light while the deliveries have been fair, and stocks are now reduced to a fairly low level. Prices are firm.

United States oak logs.—There has been no import during the past month, stocks are ample for the quiet demand; prices are easier. Planks have come forward freely, stocks are heavy, and prices difficult to maintain; shippers should act cautiously in consigning; the total stock including outside depots now amounts to 431,000 cubic feet, as compared with 395,000 cubic feet this time last year.

British Columbian and Oregon pine.—No arrivals. Deliveries have been moderate; stocks are still heavy and prices difficult to maintain.

Current prices are quoted as follows:

YELLOW PINE TIMBER—		£	s.	d.	at	£	s.	d.
Quebec, square wood, per cu. ft.		0	2	9		0	4	0
Waney board, square wood, per cu. ft.		0	3	0		0	5	6
St. John, 18-in. average, per cu. ft.		0	2	6		0	3	6
RED PINE, per cu. ft.		0	2	2		0	2	9
OAK—1st quality, per cu. ft.		0	3	6		0	4	0
2nd quality, per cu. ft.		0	2	6		0	3	3
Elm, per cu. ft.		0	3	6		0	5	6
ASH, per cu. ft.		0	1	8		0	3	0
BIRCH, St. John, per cu. ft.		0	1	7		0	2	2
Quebec, per cu. ft.		0	1	8		0	2	10
Nova Scotia, etc., per cu. ft.		0	1	3		0	1	10
BIRCH PLANKS, per cu. ft.		0	1	0		0	1	6
DEALS, Quebec, Yellow, per standard								
1st quality, per standard		27	0	0		43	0	0
2nd quality, per standard		21	0	0		30	10	0
3rd quality, per standard		13	10	0		18	0	0
DEALS, SPRUCE—								
St. John, Miramichi, etc., per standard		9	0	0		9	15	0
Nova Scotia, etc., per standard		8	15	0		9	10	0
BOARDS, SPRUCE, Etc., per standard		8	5	0		9	5	0
OARS, Ash, per running foot		0	0	6		0	0	11

Liverpool and Manchester Stocks

H. W. Lightburne & Company, Liverpool, England, and their Canadian representatives Messrs. John E. Moore & Company, Limited, St. John, N.B., report as follows in regard to stocks of spruce, pine and birch at Liverpool and Manchester under date of May 1st.

Spruce and Birch Month Ending 30th April, 1914.

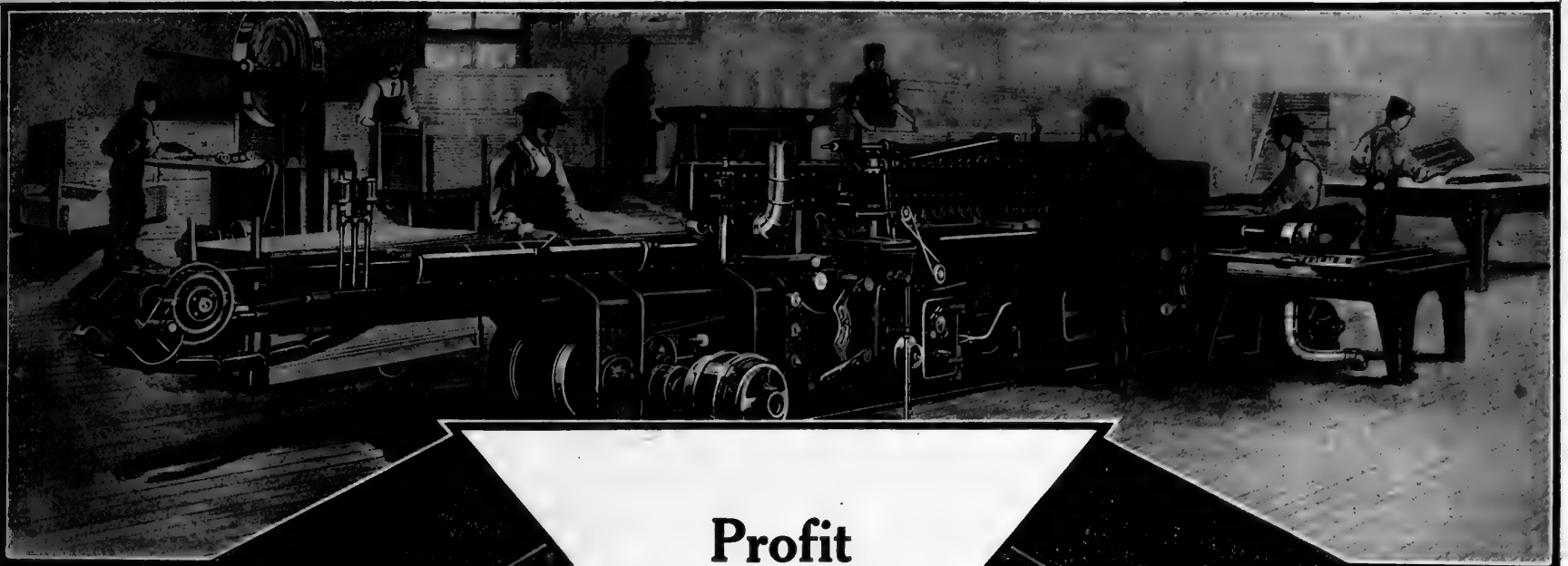
	Import			Consumption			Stock		
	1912.	1913.	1914.	1912.	1913.	1914.	1912.	1913.	1914.
N.B. & N.S. Spruce									
& Pine, Stds. ...	1,960	2,600	1,940	2,460	2,770	2,200	3,080	2,730	5,830
Birch Logs, Loads	680	480	460	460	300	280	560	580	720
Birch Planks, Stds.	358	188	103	285	218	182	424	443	382
Manchester									
Spruce, Stds. ...	1,930	1,190	590	2,060	2,790	2,270	5,130	5,240	9,880
Birch Logs, Loads	0	0	180	0	40	80	40	260	240
Birch Planks, Stds.	164	85	0	24	91	109	194	418	261

Stocks in Manchester and Liverpool Combined Spruce

	1910.	1911.	1912.	1913.	1914.
Manchester	6,760	5,450	5,130	5,240	9,880
Liverpool	5,640	4,050	3,080	2,730	5,830
	12,400	9,500	8,210	7,970	15,710 Stds.
Birch Logs					
Manchester	120	180	40	260	240
Liverpool	500	600	560	580	720
	620	780	600	840	960 Loads.
Birch Planks					
Manchester	812	36	194	418	261
Liverpool	376	188	424	443	382
	1,188	224	618	861	643 Stds.

Barbados Market

S. P. Musson, Son & Company, Barbados, report under date of May 8th, as follows: Lumberstuffs.—White pine—There have been no arrivals during the fortnight, but dealers will not make any contracts as they have plenty of stocks. Spruce—No receipts, but supplies are sufficient for present requirements. Pitch pine—The "S.S. Mecklenburgh" brought 105 m. ft. which had been previously contracted for. Shingles—The S.S. "Chaleur" brought 50 m. clear whites which were imported for a dealer. No receipts of extra No. 1 or Long Gaspe, but some of the former have been sold to arrive. Shooks—No arrivals. Wood hoops—Receipts consist of 600 bdls. by the S. S. "Spheroid" and 500 by the "Serrana," both lots having been imported on dealers' account.



Profit from Low Value Lumber

THE LINDERMAN AUTOMATIC DOVETAIL GLUE JOINTER will enable you to solve three important problems. YIELDING \$4.00 to \$6.00 MORE PROFIT PER THOUSAND.

1st. 4-in. COMMON LUMBER.

In most Western Mills this is sold for approximately \$7.50 per thousand, whereas 8-in. shiplap brings from \$14.00 to \$16.00.

THE LINDERMAN DOVETAILER will take two 4-in. strips, convert them into a board $7\frac{3}{4}$ in. wide, allowing $\frac{1}{2}$ -in. for jointing both edges to make the lap, leaving a full 7-in. face, at a cost of .75c per thousand board feet. Add the cost of handling the lumber and of milling it into shiplap, leaves a net profit of at least \$4.00 a thousand.

2nd. No. 3 GRADES, 6-in., 8-in. and 10-in. wide.

In most Western Mills No. 3 Grades increase in price perceptibly as it increases in width. One prominent lumber manufacturer maintains by converting 6-in., 8-in. and 10-in. widths of this grade into 12-in., 14-in. and 16-in. lumber, he will be able to obtain fully \$4.00 a thousand more for it.

The cost of jointing this lumber on a LINDERMAN MACHINE is .75c per thousand, leaving a net profit of \$3.25.

3rd. 2-in. and 3-in. STRIPS.

Practically all mills leave in the slab or convert into lath all lumber, regardless of grade, under 4-in. in width. By installing a LINDERMAN MACHINE and by saving all 2-in., $2\frac{1}{2}$ -in., 3-in. and $3\frac{1}{2}$ -in. stock this lumber can be converted into any width board desired at a cost which will average approximately \$1.00 per thousand board feet. Profit from \$4.00 to \$8.00.

We are willing to send, at our expense, several pieces of 16-ft. long 8-in. lumber joined by our method, in Spruce, to any Lumber Manufacturer in the Dominion to be milled by his usual method, inspected and put to any test as to strength, durability and equality as compared with 8-in. one-piece stock, or we will join up any lumber which we can purchase in our local markets if spruce is not acceptable, or will join free of charge and will stand transportation charges both ways, any lumber which may be sent to us up to 1,000 feet.

A LINDERMAN DOVETAILER installed in your mill should and can save you at least \$5,000.00 a year, if not more. We realize thoroughly this is a large figure, but would like the opportunity of putting our proposition before you so that it may be thoroughly considered by you and your assistants.

Canadian Linderman Co. Limited

MUSKEGON, Mich.

Works at

WOODSTOCK. Ont.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Fireproofing by Cement-Gun Process

The Gun-crete Company has opened its new offices in the McCormick Building, Chicago. This firm specializes in Cement-Gun work for engineering, industrial and mining structures. It has at its disposal a large amount of the most modern Cement-Gun equipment, and a very efficient working organization.

The Gun-crete process they state, will prove especially valuable to lumbering and woodworking plants for the fireproofing of the machinery buildings, dry kilns, etc. The process consists of covering the interior or exterior of the building, or both, with wire fabric, and then applying a cement-coating with compressed air.

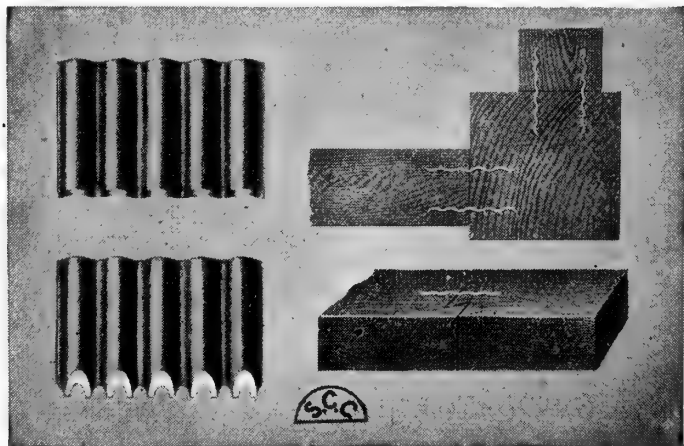
This process has been extensively used and is claimed to be considerably cheaper than any other known method of fireproofing. Gun-crete is also advantageously used for encasing steel structures, bridges, tanks, docks, wharfs, etc.

Mr. Carl Weber, the president of the Gun-crete Company, is widely known as a successful cement-engineer. He is the inventor of the reinforced concrete Chimney of which thousands have been built and has designed and erected a large number of other important engineering structures. He has been connected with Cement-Gun operations for some time and is a leading expert in this kind of work.

Corrugated Joint Fasteners

Corrugated Joint Fasteners are ever increasing in usefulness. They are handy for any kind of wood joining and most convenient for uniting two piece basket bottoms, picture frames, screens, and for repairing furniture, etc.

Corrugated Fasteners are made in two styles, plain edge and saw edge. Plain edge fasteners are generally used for hardwoods, or for driving into the end grain of soft woods, such as joining narrow



Corrugated joint fasteners—a useful device.

widths for box shooks. Multiple point or saw edge fasteners are better suited for soft wood when driven across the grain as they cut their way more readily than the plain edge without crushing the wood. They are packed in boxes containing 250 fasteners or in kegs of 100 lbs. each.

Corrugated Joint Fasteners are manufactured by the Steel Company of Canada, Limited, Hamilton, Ont., who will send samples and quote prices willingly on request.

Forced Draft and Economizers

Among lumber manufacturers and pulp and paper manufacturers in Canada a very general belief prevails in regard to the benefit secured by the use of fuel economizers and forced draft. Interesting instances of the recognition of this benefit are afforded by the cases of the Brompton Pulp and Paper Company, East Angus, P.Q., who are installing a 1,200 B.h.p. economizer; The Belgo-Canadian Pulp & Paper Company, Shawinigan Falls, P.Q., a 750 B.h.p. economizer; also the Toronto Housing Company, a 450 B.h.p. economizer and the Canadian Kodak Company, Toronto, a 1,200 B.h.p. economizer. These installations are being made by the B. F. Sturtevant Company of Canada, Limited, Galt, Ont.

Recently, at a meeting of the Chicago section of the American

Society of Mechanical Engineers, Mr. W. L. Abbott of the Chicago Commonwealth Edison Company, during a discussion of "large steam power plants," spoke very strongly in favor of economizers and of mechanical draft. The Chicago Commonwealth Edison Company operates one of the largest central stations in the world and Mr. Abbott's views are very well worth noting, especially as he is one of their most prominent engineers. In regard to boiler operation Mr. Abbott said:

"Air is taken at a normal temperature, heated up to 2,000 or 2,500 deg. and cooled down to 500 or 600 deg. The rest of the heat is used to create a draft, that is, the air is driven up a smokestack, pulling fresh air after it, through a fuel bed. To use twenty per cent. of the heat of the fuel merely to push air through the fuel bed is a wasteful process. It is true that the temperature of the water in the boiler is some 400 deg. and cannot cool down the air. The remedy is to use economizer and cool down the furnace gases, to the lowest point possible. Abolish smokestacks for the purpose of creating draft. Boilers are being forced 100 per cent. every day, and with forced draft from 300 to 400 per cent. and still the limit has not been reached. The boiler can be cut in two, and half of it forced in 500 per cent. if necessary. The other half could be used as an economizer in two stages if need be, and the gases cooled to the temperature of the feed water. In this way, there is a possible saving of 20 per cent."

Definite statements of this nature in favor of economizers and forced draft are becoming more and more frequent, due undoubtedly to the fact that economizers have accomplished remarkable fuel saving.

Sawmill Resaws—What They Must Do

An interesting and attractive booklet upon band resaws for sawmills has been published by Wm. B. Mershon & Company, Saginaw, Mich. The book contains a number of interesting illustrations of the various vertical and horizontal resaws for use in sawmills, manufactured by this company. Good descriptions of these saws and the work which they will do are contained in the book.

Referring to the work which a resaw for sawmill service is required to do, the book states that the fundamental requirements of a vertical resaw in a sawmill are as follows:—

"It must self-center; that is, divide up the surplus thickness of plank which are plump, making the lumber of uniform thickness in the piles.

"It must not self-center plank which are so scant in thickness that they will not yield two perfect boards—but it must automatically make one good board, instead of two saw culls.

"It must reclaim one or more merchantable boards from every slab which for any reason has left the carriage thicker than it should.

"In sawing small logs the resaw should be capable of converting the entire log into lumber after it has been split by the band mill.

"It must have set works by means of which the sawyer can instantly, conveniently and accurately set the feed rolls, so as to resaw anything that goes down the live rolls, regardless of its dimensions, into any desired finished thickness—it must saw anything in any way desired.

"Finally, the sawmill resaw must be simple in construction, easily understood and operated, and not likely to get out of repair or adjustment."

Mershon sawmill resaws, it is claimed, meet all of these requirements fully.

In addition to the descriptions of the resaw, the book contains two very interesting floor plans of sawmills showing the position which the resaw should occupy.

The National Lumber Manufacturers' Association recently decided to hold their 1915 convention at the Panama-Pacific International Exposition in San Francisco. In addition to the convention, there will be an exhibit of lumber and manufactured products consisting largely of the travelling Forest Products Exposition, which after being displayed in various eastern cities will be housed in one of the exposition buildings. The Concatenated Order of Hoo-Hoo will also have a varied exhibit of lumber products in a unique lumbermen's building which it will erect at the exposition, at a cost of \$50,000. This building will also be used as a social headquarters for lumbermen in general.



Capacity - Efficiency - Service

Canadian Western Lumber Co.



Limited

Fraser Mills, B. C.

Everything in Coast Lumber

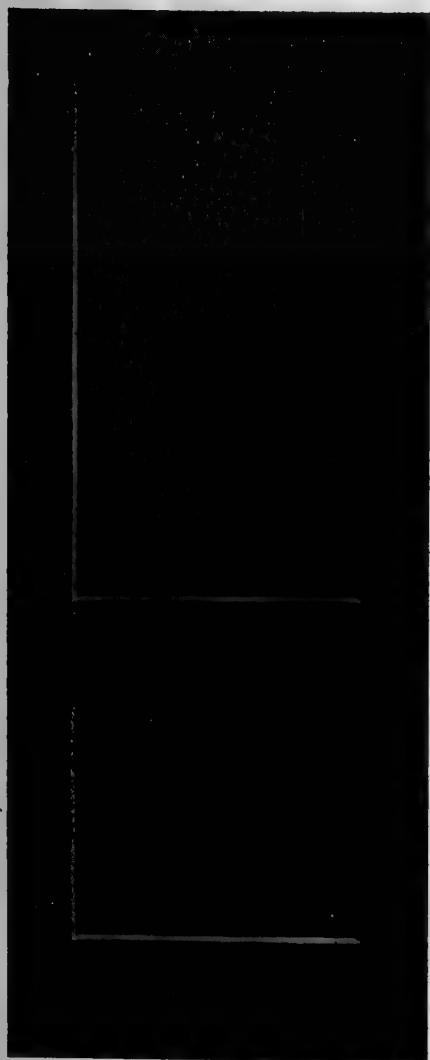
Daily Capacity (20 hours)

Lumber and Timber..... 1,000,000 feet

Shingles..... 900,000

Fir Doors..... 2,000

Three Ply Fir Veneer Panels 30,000 sq. feet



Perfect Douglas Fir Doors

Our Doors are sold by progressive Dealers from Pacific to Atlantic being made from the choicest selected stock produced by our big mill and manufactured by the most improved method in

Canada's Largest Door Factory

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Ball Bearings in Woodworking Plants

The Importance of Eliminating Friction—Increased Load Available Without Installing Additional Power—A Subject Worthy of Close Study

By N. G. Near*

Many a man thinks conditions in his shop are all right "just as they are" so long as the wheels go 'round and external appearances are kept up. Running under such conditions, it is an undisputed fact that the ledgers show a neat profit in many factories at the end of each fiscal year, and that is the principal reason why the owners are wont to overlook the possibility of increased earnings. As one writer very aptly put it, "The dollar the man is making blinds him to what he is losing." I myself suggested some changes to the owner of a large plant not so long ago, and, although he listened in an interested way his reply was, "It's a lot of trouble putting in a pile of new apparatus just to save a few cents, and it costs money to make the changes. I hope some day to have a model shop, but we are so busy right now that I can't think of improvements." Anyway, we're making a good profit. What more could I want?" Such an argument is not very easily answered. It is where the owner is discontent with his output that you get a ready audience with your money saving methods.

A Difficult Problem Solved

I have in mind a woodworking plant where there were two planers, a saw, several lathes, a sander and a grindstone, all driven by a 10 horse-power gasoline engine. When all machines were in use at the same time the engine was taxed to its limit; it would slow down and threaten to stop, and in order to bring the engine back to normal speed one of the planers would be cut out. This worried the owner considerably for it certainly was costing him the wages of one man during the time the planer was out of commission, besides, he had so much work to do that he was considering the installation of more machines. His problem was: how could he increase the capacity of his plant without buying a new engine capable of handling the entire load with new machines installed, or without buying another smaller engine large enough to run the additional machines? He wrote letters to manufacturers of gasoline engines and found them all ready to sell. Some of them sent representatives who looked the plant over, and on being asked for advice as to the correct way to proceed most of these representatives told the owner that the best way to handle the proposition was to install a new, smaller engine, which could be run during "peak" periods, the old engine being large enough to handle the usual load. The owner was told that this arrangement would be "most economical."

Proof Furnished by Experience

Some ball bearing salesman heard of the predicament of this man and decided to pay him a visit and see whether or not ball bearings would not solve the problem. The owner listened to the salesman's proposal but that was about all. He laughed at him when the salesman told him that it was quite possible to get along with the old engine with more machines on the line shaft. By this time the owner had practically decided to install a new, smaller engine, and he had given the matter so much thought that he believed no other solution was possible. However, he picked up the threads of the salesman's arguments and wrote to several ball bearing manufacturers to find out whether or not this salesman's assertions would be confirmed by competitors. He was delighted to find that all of them answered him in about the same manner: they all assured him that experience had proved their point. Much less power is required both to start and to drive a shaft mounted on ball bearings. Both scientists and practitioners have shown this to be true. And the friction does not increase with gumming, as in plain bearings, because balls need practically no lubricant. All that is necessary is enough lubricant to cover the surface and keep the balls and races from rusting. As for wear, there has been such an advance in methods of manufacture and in materials that renewals need not be made for many years, in the average installation. Of course, dirt and grit must be kept out or they would soon grind the surfaces rough, the fits would loosen, and the bearings would soon give most unsatisfactory results. But the same is true of plain bearings; it is just as absurd to allow grit and dirt to get into them. So, it is now found that there are very few places where plain bearings are used, in which ball bearings could not be used also, and, so used that they would emphatically reduce friction.

Steadier Power and More of it

The owner studied these points over carefully and soon decided to throw his new-engine-proposition overboard. He called in the salesman who had first visited him and told him to go ahead with the job and show him with actual figures just what savings would result

from his scheme; figure on the size of bearings needed, and render such service as was unavailable in the owner's staff. This the salesman did, and after the bearings were installed the owner's face looked much brighter. The engine was running along at a pretty clip with much less effort than on the day before with the plain bearings still in. The normal speed of the engine was 240 r.p.m., and since it was built on the four-cycle hit and miss principle there were about 120 explosions per minute on the previous day. To-day he counted only 90, with all machines running simultaneously! This meant that he could still increase the capacity of his plant about 40 per cent, which certainly would be sufficiently large for many years to come. He bought additional machines as needed, installed them, and now has almost twice as many as he had before changing over to the ball type. No greater ball bearing enthusiast can be found, for the many savings this owner has discovered that are attributable to ball bearings have made him an ardent enemy of the old, plain type. He did not have to install new belting except on the new machines; his lubricating costs were cut down materially; and the cost of maintenance was emphatically reduced. Besides, he found that the quality of workmanship was bettered, not because the workmen were doing better or more careful work, but because power came to the machines much more smoothly; it seemed that vibrations had been materially reduced.

Not An Exceptional Case

The above is not an exceptional case. Nearly every plant in the country is being increased in capacity from year to year, and, to drive more machines, more power, of course, is needed. It is obvious, then, that where conditions are similar to those in the above example it is well worth while to install ball bearings or to at least give them a thought. They might not solve all problems, for much depends on the number of bearings in service and the alignment of the shafting. It is often possible to get around the installation of ball bearings for a season by cleaning the old bearings, rebabbiting them, and lining the shafting properly.

Manufacturers now-a-days are uniformly truthful in their statements. If they tell you a certain thing is possible you are pretty safe in giving them consideration. Engineers and skilled mechanics are employed both in the field and in the office to give free advice to prospective and old customers and they are explicitly informed by the manufacturer always to be frank and honest in all of their dealings. They know from experience that it pays to be truthful in making claims for their wares and it is their business to make the transaction an economical and satisfactory one for the purchaser, as well as a profitable one for the manufacturer. Further, should failure occur in a ball bearings, the manufacturer is usually willing to fix things up at reasonable cost provided the bearing was at fault. Of course, if a man spoils a bearing through sheer blunder, the manufacturer can hardly be expected to hold himself responsible. If the bearing is entirely at fault the manufacturer will usually fix things up at his own expense for no live concern can afford to harbor failures. Black eyes are bad in business.

Personal Paragraphs

Mr. James Reid Wilson, Montreal, whose death in London, Eng., was recently announced, was a director of the Wayagamack Pulp and Paper Company, Limited.

Mr. L. M. Wood, Toronto, has been elected president of the Standard Chemical Iron and Lumber Company, Limited, to succeed Lt.-Col. A. G. Peuchen, the former president who has retired in order to devote more time to his personal interests.

Mr. C. W. Wilkinson, vice-president of the Union Lumber Company, Limited, Toronto, returned last week from an extended trip to Europe. During his absence Mr. Wilkinson visited many points of interest in England, France, Germany, Italy and other well known centres.

C. C. Muir, formerly secretary of the New Ladysmith Lumber Company, Nanaimo, B.C., has assumed the duties of manager of the Island Lumber Company, Duncan, on the Esquimalt & Nanaimo Railway, between Victoria and Nanaimo. This mill has a capacity of 100,000 feet per day.

The Canada Lumber Sales Company, Montreal, were represented at the New York Forest Products Exhibition by Messrs. Arthur P. Beaupre, managing director, and J. Henry Poulin, sales manager. One of the objects of the visit was to meet principals of the United States mills with whom the company do business.

* Specially written for the Canada Lumberman and Woodworker.

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Canadian Timber Trade in the Far East

Reports from Commissioners Explain Recent Decreases and the Increase in U. S. Trade in the Same Markets

The Department of Trade & Commerce, at the request chiefly of the Forest Branch of the Department of Lands of British Columbia, recently sent out requests to Canadian Trade Commissioners for reports upon the markets for Canadian timber and lumber in various foreign countries. In the weekly report of the Department for May 11th several replies to this request are published. The Canadian Trade Commissioner for Japan reports in part as follows:—

The imports of lumber are considerable and are increasing. In 1910 Oregon pine, fir and cedar to the value of 749,940 yen (\$374,970) were imported from the United States, Canada and other countries, which increased in 1911 to 813,741 yen (\$406,870), in 1912 to 1,029,505 yen (\$514,752), and in 1913 to 1,279,771 yen (\$639,885). Of the pine, fir and cedar imported in the years under review, the United States supplied over 87 per cent. and Canada about 10 per cent. Oregon pine (Douglas fir) is used in Japan in construction work of all kinds, in buildings, bridges and other structures, and the demand is increasing.

Among the lumber importing firms in this country, both foreign and Japanese, there is a good deal of conflicting opinion as to the reason why Canadian lumber is so little used, while United States lumber from Portland, Seattle and Tacoma comes into the country. While some attribute it partly to higher prices, and others to delay on the part of manufacturers in the execution of their orders, all seem agreed in the opinion that the difficulty of securing freight space on steamers, and then only at irregular intervals, is the real stumbling-block in the way of the development of this branch of Canadian trade. Lack of knowledge on the part of consumers in regard to Canadian lumber, and therefore lack of demand for it, also contributes.

The flooring used is tongued and grooved, 1 inch in thickness by 2 inches to 6 inches in width, ranging from 12 feet to 24 feet in length. Ship timbers are 6 inches by 8 inches, 20 to 32 feet long. Decking in demand is 2 inches by 5 inches to 4 inches by 6 inches, length 30 feet to 50 feet. Heavy timbers range from 12 inches square to 25 inches square, from 25 feet in length up.

Lumber imported into Japan for the four years 1910, 1911, 1912 and 1913 is shown in the following table:—

	Pine, Fir and Cedar			
	1910.	1911.	1912.	1913.
	*Yen.	Yen.	Yen.	Yen.
United States ...	672,853	741,231	954,601	1,012,742
Great Britain ...	441	1,394	16,086	27,718
British America ...	70,258	68,712	51,982	230,351
Other Countries ...	6,188	2,404	6,836	8,910
	749,740	813,741	1,029,505	1,279,721

*1 Yen = 50 cents (Canadian currency.)

The duty on pine, fir and cedar (with the exception of cedar of a size 17½ inches x 2¾ inches x 9/32 inch or less, which is free) not exceeding 2½ inches in thickness, is 3.10 yen per cubic metre (= 423.77 board feet) or \$3.65 per M board measure, and on pine, fir and cedar over 2½ inches thick, is 1.80 yen per cubic metre, or \$2.12 per M board measure.

Chinese Railways Need Canadian Ties

The same commissioner's report in regard to the market in China says:—

An effort has recently been made to induce the chief engineers of the various railways under English management, to specify Canadian in addition to Australian, Japanese and American wood when inviting tenders for the supply of railway sleepers (ties). In general the effort has been met in a sympathetic manner, the answer received plainly showing that Canadian ties would have a good chance in this market if quality and price are as good as from other sources. A wood largely used for this purpose in the past is Australian Jarra, an extremely hard wood, in which holes for spikes are drilled before they leave the storeyard.

Interviewing one of the largest English firms in the far east at Shanghai, who import large quantities of railway material, the manager of the lumber department stated that his firm would much prefer to import Canadian railway sleepers and lumber rather than United States, merely for reasons of sentiment.

Sleepers for India

There is a large market in India for railway sleepers. An engineer employed by the Indian Government and representing the Indian Government Railways and two private companies, travelled recently to the Pacific coast and through to the Eastern States to buy a million

sleepers. They were required to be of the best quality and creosoted to resist the encroachments of the white ant.

This engineer was making his fifth trip to America for this purpose, and was not very hopeful of getting what he required on the Pacific coast, or even in the Eastern States, without a great deal of trouble, if at all. It appears that, in addition to the wood being often cracked and split, the creosoting is usually badly done, the wood not being thoroughly impregnated with the oil, and the latter itself more often than not being of inferior quality.

Trade With Australia

The Canadian Trade Commissioner for Australia reports in part as follows:—

Taken as a whole, the importing of Douglas fir into Australia, from both the United States and Canada, has for some time been unsatisfactory business to the Australian trade. Many of the large saw millers in Australia have recently ceased importing cargoes. They have gone out of the cargo business as they have found it pays them better to buy in "parcels" or part cargoes often when actually on the voyage.

The cause of the change in the old established procedure is simply that the American shipper (i.e., the brokers in the business with representatives at Sydney and Melbourne) have found it more profitable to gamble on the freights than to make a profit on the lumber itself.

The bulk of Douglas fir comes to Australia on time chartered steamers—every day's delay counts materially either in loading, bunkering and discharging—and because United States ports provide quicker facilities for loading than British Columbia ports it makes it more profitable for the shipping or selling brokers to load cargoes at Washington State and Oregon ports.

A leading firm in Sydney (of undoubted reputation and integrity) when interviewed in relation to the comparative rates of loading steamers in British Columbia and United States ports, stated:—

"Hitherto we have not been successful in exceeding an average of 200 M feet board measurement per working day on the British Columbia side, whereas Puget Sound and Columbia River frequently load steamers up to 400 M feet per working day. We may add that our last cargo from Puget Sound averaged 300 M feet per working day, although handicapped by having to follow another large steamer at the same mills."

It is obvious, if quotations for the timber are similar at British Columbia and United States ports—and other expenses are on a parity—that if a steamer, engaged on a time charter, can load at least 50 per cent. quicker at one port, this port will get the business. The Hastings Mill (B.C.) has recently loaded at the rate of 250 M feet per working day, which shows improved facilities.

Increasing Imports of Douglas Fir

The large and increasing imports of Douglas fir (known here as "Oregon") into Australia are chiefly from Columbia River and adjacent ports, where an inferior grade of lumber (in comparison with that from British Columbia) is furnished. It is sold at attractive prices to the Australian buyer and, naturally, he overlooks the quality because the business is profitable. From inquiries made in various reliable sources, the quality of the British Columbia lumber is ad-

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REDWOOD
HUMBOLDT AIR-DRIED

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In regular stock proportions:
5-4, 6-4 and 8-4, D. 2 S. 1 13 16,
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B.C. FIR FOR INTERIOR TRIM AT LESS MONEY

Casings, Base, Finish, Flooring, V-Joint Ceiling and Mouldings.

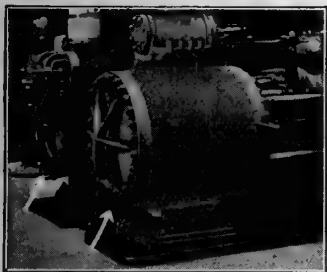
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Increased Plant Efficiency

Goodyear Equipment sets a new standard of efficiency and service in the lumber mill—from packing for pipes to the big master transmission belts that must

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Service being the paramount consideration, the economy takes care of itself.

Belting

Goodyear Belts are made to meet exact and unusual conditions. Only the best cotton duck, laboratory tested, is used, impregnated and covered with the highest quality of rubber for maximum service. Each belt is vulcanized under hydraulic pressure. Your Goodyear belt is *right* when you put it on—*stays* right—no after adjustments necessary—no loss through interrupted production and belt repairs.

From the Goodyear "Quality" Belting for the main drive, to the "Imperial High Speed" Belting for edger, trimmer and planer work, every exact requirement is met. Tell us your belting needs, and we will tell you just what belt—and *why*!



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For high pressures and low, steam, water, gas, air, ammonia, oils, greases and acids, there is just the specific Goodyear Packing for the very purpose. No need to constantly dismember pipes to renew packing. No escaping steam—no lost power—no fumes—no lost motion—no lost dollars. Goodyear Packings save equipment, time and money.

Hose

Goodyear Steam Hose stands the heat without rapidly "cooking to death." That is because of the special compound used for the lining and the Goodyear method of curing. Marlin woven. This allows of even expansion and most comfortable handling. There's a big difference between hose made to meet a price, and Goodyear hose made for service. And even on a "price" basis the service kind wins out.

Goodyear Efficiency Bureau Put your factory equipment problems up to Goodyear. Costs you nothing to confer—no obligation. Tell us your needs and we'll tell you of the exact equipment. There's satisfaction, service and saving in starting right. To the cost of poor equipment you must eventually add production loss. Think that over!

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(47)

The Rat Portage Lumber Co., Ltd.

With Mills at Winnipeg, Man. Vancouver, B. C. Harrison River, B. C. Kenora, Ont. Rainy River, Ont. and Banning, Ont.

Manufacturers of

Lumber, Lath, Shingles, Sash and Doors

And all kinds of Woodwork and Interior Finish. Also Box Shooks and Packing Cases. White and Red Pine Lumber, Maple Flooring, Hardwood Lumber, Turned and Band Saw Work, Cedar Posts and Poles, Tamarac, Piling etc.

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D. C. CAMERON, President and General Manager.

mittedly superior to the bulk received from the present principal sources of supply in the United States. Some importers expressed the opinion that "it only requires a series of regular supplies from mills in British Columbia to establish a name for quality and cutting that would create a constant demand for Canadian Douglas fir." Further, "with the experience of regular shipments, Canadian lumber mills and collieries would better their facilities for loading and despatch."

In connection with the Australian trade the Commissioner suggests that the following obstacles must be overcome by British Columbia lumber shippers in order to increase their business with Australia:—

1. Better loading facilities in United States Pacific ports and the obvious saving to charterers of steamers.
2. Better facilities for loading bunker coal at a less cost than in British Columbia ports.
3. Slightly more favorable bank exchange in the United States.
4. Better opportunities for disposal and discharge of return cargoes of Australian coal at United States ports.

Statistics furnished, under date of February 1, 1914, by the secretary of the Pacific Lumber Inspection Bureau, Seattle, in regard to the British Columbia exports of lumber to Australia show the following marked contraction:—

	Ft. B. M.
1912 exports from B. C. to Australia	25,153,174
1913 exports from B. C. to Australia	9,967,980

Decrease in B. C. exports in 1913 15,185,194

It is stated that the total exports of Douglas fir from the United States Pacific coast ports and British Columbia ports in 1912 and 1913 aggregated as follows:—

	Ft. B. M.
1913 total U. S. and B. C.	238,773,612
1912 total U. S. and B. C.	199,074,325

Increase 1913 over 1912 39,699,287

The Douglas fir schedules disclose a very serious loss in trade to British Columbia, and it must not be overlooked that the returns do not include lumber exported from Californian ports to Australia, which comprises redwood, yellow pine, sugar pine, etc., amounting to about 40,000,000 feet B. M. per annum.

Ignorance of Planing Mill Costs

The title originally selected for this article was "Planing Mill Costs," but it was changed to the above, as more nearly expressing the true state of affairs. Does this seem like a strong statement? Then you, Mr. Mill-owner, Mr. Estimator and Mr. Superintendent, ask yourself this question, "How much do I really know about costs in my factory? Am I basing my estimates on definite, accurate knowledge, or merely on a guess which I believe to be correct, but do not know to be absolutely true?" Then give yourself an honest, straightforward answer and see if there is not a great deal of truth in that opening sentence.

Ask any mill man to tell you how he arrives at his costs and he is pretty sure to say: "I figure up the lumber, adding a certain percentage for waste, estimate the labor cost, and add the overhead, which gives the cost of production." Then pin him down to something definite. Ask him, for example, the labor cost on a box window frame, two lights, 20 x 32. The chances are he will say: "Well, that depends. It will usually cost from 35 to 60c, depending on the detail and the number made at one time. I generally figure an average price of 50c, which experience tells me is about right." You see, he does not know, but he does know that he can figure about 50c and strike the market about right, without knowing whether he is making money or not.

Why should this condition exist? Why should not the estimator be able to say: "It will cost 45c to make that frame," and know that the actual cost will be 45c? Surely, if one may spend money, he can determine exactly what he gets in return, and cost-finding becomes merely a matter of following money from the cashier's hand to the receipt of value therefor, whether this takes the form of actual merchandise, bought at a fixed price, or labor hours, paid for as such and measured by the amount of salable goods produced per hour or per dollar's worth of labor.

The question of the proper percentage of waste to add in figuring lumber was so ably handled by a writer in the March Wood-Worker that it will be no more than mentioned here, and that only for the purpose of relating a recent experience. Having occasion to name a price on some work involving about 15,000-ft. of lumber, the estimator, after figuring the number of feet required, based on random widths and regular lengths, added 10 per cent to cover extra waste. The order being secured and the amount of lumber actually cut being ascertained, it was found that the estimate was some 300-ft. short.

As this seemed to be excessive, the estimator investigated and found that the waste was owing to the fact that the lengths figured were not in stock at the time and could not be obtained without five to six weeks' delay, and it had therefore become necessary to cut lengths which would neither cut to advantage nor make cuttings which could be used for anything but fuel. This could not reasonably be expected to be known by the estimator, but if records had been kept and waste allowed for as outlined in the article previously mentioned, this excessive waste might still have occurred, but would have been allowed for.

The writer has been greatly interested lately in several books and magazine articles describing the system known as "Scientific Management." It is not intended to describe this system here, but it is an undeniable fact that whoever invented it knew something of cost-keeping. The method of operation seems to be to time every operation with a stop-watch and then analyze every movement, to see if there is a possibility of reducing the number of motions required and the time for performing the operation as a whole, with a consequent reduction of cost.

Just to see if we can learn anything from this, let us analyze the work of making a box window frame. The operations are usually as follows: 1—laying out and making a cutting bill; 2—surfacing lumber on two sides; 3—ripping; 4—cross-cutting; 5—molder; 6—trimming and gaining; 7—band-sawing such parts as arch bars, if any are used; 8—cutting pockets and routing for pulleys; 9—nailing up, which will include fitting-parting beads and (usually, unless of hardwood) inside stops and placing of pulleys. Labor cost is made up of these nine operations, and any estimate of cost should be based on records showing exactly how much time is required for each one, and a summary of the whole cost from beginning to end.

Here is where the cost-keeper can properly employ the methods of the efficiency expert. Let the time, in split seconds, be kept on every operation performed in the mill for a period of one year; the results tabulated and averaged; the number of productive labor hours compared with the total number of working hours as shown by time-books and pay roll, and we arrive at a working basis which could be made as nearly accurate as it is possible for anything human to be. It is absolutely necessary that the record extend over at least one entire year, because of the well-known fact that even the best workman will work faster when he knows that work is piling up ahead of him than he will when work is slack.

I have seen first-class mechanics dawdle along for half a day, perhaps, on a job which could easily be done in half the time, because they knew there was nothing ahead, and if they finished too quickly were very apt to be laid off. This is a very human trait, and one for which the workman is scarcely to be blamed, but the resulting condition is an element of cost which cannot safely be ignored by the person who undertakes to make and sell mill work at a profit. By averaging the yearly record the charges are distributed so that the extra cost of the slow, time-killing work is borne by the busy hours, a distribution which is absolutely necessary, as it is a practical impossibility to obtain higher prices during these periods of increased cost.

It has never been my privilege to see the actual working of any cost system worthy the name, and such descriptions as are obtainable seem to apply to almost any line of manufacture other than that of special mill work. The nearest thing to a system which has come under my personal observation consists of having spaces ruled on the back of the work ticket for a cutting bill, and other spaces printed and ruled for the workman to put down the number of hours and minutes spent on the particular job in hand, together with the name of the machine or hand operation being performed. As this was only required to be done on such orders as were taken without price, to be charged for on a time-and-material basis, the men usually overlooked putting down their time until the work was completed and then the foreman would put down about what he thought it should be. This was, of course, much better than no system at all, but very little, if any, better than the usual method, in which the man making the charge will "guess it cost about a dollar," and let it go at that.

The statement is often made that cost systems are too expensive; that the time and money spent in securing accurate data is more valuable than the information obtained. This is true of those systems which are content to stop with the simple finding of costs, but if used intelligently and made a permanent part of the factory organization, there is no good reason why the expenditure should not prove to be a good investment. If properly used, the cost sheets should not only contain an exact record of time and material used on each job, but show where the leaks are and what methods could be applied to stop them. There are few men with the intelligence of the average wood-worker who will not readily listen to and apply a timely suggestion tending to shorten the time spent on a given operation, or if properly encouraged they will offer such suggestions themselves.

Lest some one should believe that the foregoing remarks apply to a purely local condition, let a specific instance be mentioned: In

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The Saw the Millman Looks Up to

It is the saw he depends upon if he wants to keep quantity and quality of output up and his manufacturing expenses down.

The high regard in which he holds this saw is a development from the year of efficient service which Disston Saws have been giving.

This appreciation of Disston Saws is not confined to any one country—wherever mills are converting timber into commercial lumber, there you will find Disston Band and Circulars Saws.

Our new book, "Saw Appreciation," tell why you should use Disston Inserted Tooth Saws. Free for the asking.



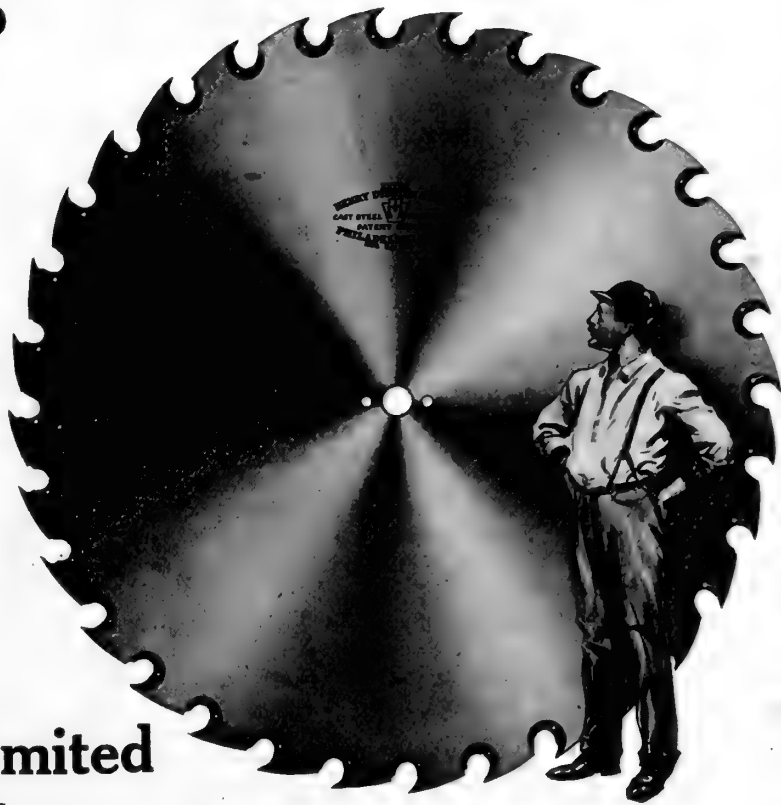
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Size "S" Single Mill with 16-foot Carriage

Size Husk 3 feet by 6 feet 3 inches
Diameter and Length Mandrel . 2 3/16 by 55 inches
Size Drive Pulley 20 by 10 inches
Feed per Revolution of Saw 0 to 3 1/4 inches
Feed Belt 4-inch Gandy
Largest Diameter Saw 56 inches
Length of Carriages 12, 16, 20 or 24 feet

Width of Carriages 33 inches
Trucks 7-inch wheels and 1 1/4-inch axles
Length Track 32, 40, 48 or 56 feet
Style and Opening of Blocks C1-36 inches
Style Mill Dogs Pony Excelsior
Style Set Works No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

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November, 1913, The Wood-Worker published a query from the writer regarding the costs of certain items of cellar door and window frames, the statement being made that information was sought for the use of our local Estimators' Club. At this writing not a single answer to this inquiry has appeared. Surely, if ignorance of this all-important subject was not well-nigh universal, some reader would by this time have given some kind of an answer. This goes a long way to prove the statement with which this article begins.—C. M. W. in The Wood-Worker.

Keeping Account of Cost on Errors

It was suggested some time ago by the writer that the cost of errors should go into the overhead expense, and should not be charged up to the jobs on which they occur. While I have never known this to be done, it is manifestly improper to acquire figuring units from cost sheets which carry a burden of error, says Chas. Cloukey in the Woodworker. But, you say, we cannot do business without making mistakes, and the customer will have to pay for them or the factory will have to lose them. That is true; but no piece of work is figured on a basis of certain error, and it is for this reason that every customer should be taxed with this necessary evil of doing business. The only way we can do this is to put it in the overhead and add it as a percentage to all of the work.

The subject of mistakes is one of the most perplexing and at the same time one of the most fascinating with which I have had intimate acquaintance. When we eliminate mistakes of ignorance and carelessness we have dealt with only those errors which we understand. It is a common saying that the best of men will make mistakes, and this is the real proof of our perplexity. Having made a close study of mistakes for about ten years, and having made little progress except to make a rather comprehensive classification, I am now delving into both psychology and metaphysics, and hope to get some real light on the subject.

However, I started out to say something about keeping a cost on errors, for if we do not keep a cost on them, how are we going to tell what to add to our overhead percentage? And another reason for keeping cost on error is to check against the offenders for efficiency. Even if the cost is not charged up to the men, the employer will be able to say when the employee asks for a raise: "Let me see; during the past six months your mistake account has cost us \$50—or perhaps it might be \$150. Do you really think we can afford to pay you more until this record shows a decided improvement?"

The means of keeping tab on mistakes is inadequate, and there are at least two reasons for this. In the first place, not every one has the backbone necessary to keep a record of his own errors, or even to report them if he can put his work across without doing so. In the second place, errors sometimes become so badly involved with the regular work that it is almost impossible to place the proper amount of expense on the mistake.

For instance, we often come across a small shortage in the quantities on the cutting bills, and this is not discovered until the work is ready to put together. Now, shall we go to all the trouble and expense of making out an error sheet, and carry it through the cost system and through the accounting system, to cover work that will take less time to get out than it will to keep track of the expense of it?

Common sense tells us that we should not spend more money to merely keep track of an error than it costs us to correct it, but the aggregate of these small errors will be considerable for a year, and should not be lost sight of. However, I believe there is a better way to handle them than to run them through on an order sheet. If the foreman of each department would keep careful notes of these small errors and turn them into the superintendent every day, they could go over the matter in a few minutes and determine the approximate cost, also the probable responsibility for the errors of the day or of the previous day, as the case may be.

Of course, this implies that each foreman would be absolutely honest about his own mistakes, also that he would not hesitate to report mistakes of the superintendent or the manager when they appear, for we all make them, and the number we make during a year's time would seem almost incredible if they were all bunched together in one place. Many of the mistakes are of little consequence in themselves, but, like little parasites, keep sucking away the profits and prevent a healthy growth of the business.

If it were not for the constructive ideas of management, for the institution of simpler and more economical processes, and the improvement in machines and methods, I believe that no complicated business like that of mill work could survive on a dead level. The steady run of error would kill it.

This is not intended for a pessimistic article at all, but is based upon a good many years' experience, and, as before stated, several years of special study of the errors made by all grades of men connected with the building business. And it is because of these con-

clusions that I believe that error should be treated as an institutional expense and put in the overhead charges of the business.

As a further illustration of how difficult it is to keep a proper error account, let us say that after a job has been completed and shipped the customer makes the discovery that he is short two windows, with their frames and trim, and a couple of inside doors, with their jambs and trim. We look up the plans and our listing, and find that we have overlooked these items and that they will have to be made and shipped as quickly as possible. Their omission is clearly an error, so we enter these quantities up on an error order number and put them through the mill. We get all the time and material on the sheet at the completion of the work, but it appears at once that we should not charge the whole amount to error, for had the items been handled with the others they would have carried the same amount of material, but should have had less time.

Now, to get at the real amount to charge to error, we will have to figure the unit cost on the first run and subtract that from the unit cost on the error run, which will give us the unit amount to charge up to the man who made the omission. Besides this amount, there may be the matter of freight. Suppose the customer is 500 miles away and the goods have been shipped in car lots. This last shipment must go local; the difference in rate is plainly chargeable to the same error.

Now let me give another case, which is still more involved and which actually happened: A fine stairway was gotten out and shipped to a neighboring city, and when it came to erection it was discovered that part of the balusters were wrong, and there were not enough of them. The correction was entered on an error number, and carried the full amount of balusters to complete the job.

Now we can see at once that this will not permit the same treatment as we have laid down for a plain error of omission, for the material and most of the time for the omitted balusters cannot be charged to error as they were to be furnished anyway, while all of the time and material of the lot which was wrong were chargeable to the error. In short, we have two classes of error on the same order sheet, and in order to distribute the cost properly we must figure the unit cost of the second run of balusters, and for the omitted ones charge up the difference between that and the first run, as we did in the case of the doors and windows, and for the spoiled ones charge up the whole unit price of the second run.

Well, it was only a few days until the unwelcome news arrived that this correction order of balusters was all wrong, too. "How the blankety-blank are we going to handle this?" says the manager. "Put out an error sheet on an error correction?" Sort of makes us want to hold up our hands now, doesn't it?

Another feature we are apt to lose sight of is the extra cost occasionally involved in making a mistake before the remedy can be started. Not long ago, in getting out the material for some complicated transom bars, one of the men ran some small moldings wrong side out, with the result that when the bench man went to put them on they projected $\frac{1}{8}$ -in. back instead of the same distance in front. The carpenter asked his foreman about it and he said to dress off the back until it was even. A row of dentil work was then put on and the pieces sanded and turned over to the men who were nailing the frames up.

The pieces would not fit into the frame as it was detailed, and they went to the frame foreman who had machined the parts, and he told them to rabbet the transom sill out so that it would fit in. This was done, and about the time they were finishing the first frame the man who had detailed and billed the work happened along, and the first thing that caught his eye was a row of dentils with the member above sanded off flush. The transom bar that was already fitted had to be taken out, and, with the others, had to be plowed out so that a projecting piece could be set in above the dentils. This time all went on the error sheet, but the time spent in making the erroneous corrections had already gone in on the original order number as being of too little consequence to make a fuss about, especially as they came up separately.

The matter of distributing the charge against the men who were responsible for this work is still another question. While it is a fact that if the workman who made the first error had followed the full-sized detail on his bill, the trouble would not have occurred at all, the first foreman should have known that the molding was wrong, and the second foreman should have known that the transom bar front was wrong, as he had the full-sized section through the bar and was even more familiar with the work than the carpenter foreman. The amount involved in this case was small, as there were only a few frames of this style, but it serves to illustrate some of the complications encountered when we attempt to count the cost of mistakes or fix the responsibility for error.

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EDGINGS

Ontario

The handle factory belonging to Ira Webster at Florence, Ont., was recently completely destroyed by fire.

The Axe Lake mill, belonging to the Muskoka Wood Manufacturing Company, Huntsville, Ont., was recently destroyed by fire.

The tie and timber camps belonging to Alvin Thompson in Gorham Township, Ont., were recently destroyed by fire. Mr. Thompson's sawmill was saved with great difficulty.

Plans have been drawn for a new timber mill costing \$20,000 to be built by J. R. Booth on Chaudiere Street, Ottawa. Mr. Booth has also drawn plans for a new sulphite mill to cost \$35,000, which will be built on Bridge Street.

The Andrews Lumber Company, Limited, Sault Ste. Marie, Ont., report that their mill at Alona Bay was completed about the middle of May, when they started sawing operations to produce the necessary boarding and roofing for the building.

Reference was recently made in these columns to the fact that the McAuliffe Davis Lumber Company, Limited, Ottawa, Ont., were making additions to their Duke Street plant. The company advise us that the additions will be quite extensive. When the plant is completed, full particulars in regard to it will be published in the Canada Lumberman, with a view to furnishing information to others who may be contemplating similar construction in the near future.

J. E. Baechler, Goderich, Ont., reports that his new sawmill, to replace the one recently destroyed by fire will be 60 ft. x 90 ft., and will have a capacity of 25,000 feet per day. The new planing mill will be 60 ft. x 130 ft., two storeys, both of which will be equipped with the very latest and most up-to-date machinery on the market. The contract price of the building will be about \$12,000, and Mr. Baechler expects to have the plant in operation on or about July 15th.

The Muskoka Wood Manufacturing Company, Huntsville, Ont., whose mill at Axe Lake, Ont., was destroyed by fire on May 17th, report that they will replace the mill, but have not yet decided as to the style of mill which will be erected. They will settle this point about the first of August, and hope to have the new mill in operation by November 1st. The mill which was destroyed was used for cutting lumber in the winter season. The fire also destroyed the blacksmith shop, office, 14 sets of log sleighs, tank, snow plough and some other equipment.

A purely formal process necessary to transfer the assets of the Abitibi Pulp and Paper Company, Limited, has necessitated the former company going into voluntary liquidation. The proceedings have no other significance and the concern, under the new name, is continuing the construction of the ground wood mill at Iroquois Falls, Ont., which, it is expected, will be in operation next month. Excavation on the paper mill has also started. Four machines are being built for the plant, which will be running in June, 1915, and will have a capacity of 65,000 tons of news print per year.

A report which was recently published regarding "Driftwood Lands and Timber Limited," to the effect that it had acquired extensive mahogany and cedar lands in Dutch Guiana and intended to erect a veneering plant in Ontario, was unfortunately an error. The information should have been applied to "South America Cabinet Woods Limited." The latter company, which was recently incorporated with a capital of \$1,000,000 and head office at Toronto, has acquired 47,407 acres of mahogany and cedar lands in Dutch Guiana which are reported to contain a large quantity of mahogany, cedar, purpleheart and greenheart. The company will probably erect a large veneering plant at some lake point in Ontario, possibly Oshawa.

Mr. Duncan Chisholm, representing the Chisholm Corporations, Limited, has entered into an agreement with the Ontario Government for the purchase of the pulp wood on the Metagami River pulp limit. Tenders for this limit were received until the 31st December last, but none of the offers were acted upon at the time because certain conditions were not considered satisfactory to the government. One of the conditions of the tender is that the company shall instal a pulp mill costing not less than \$250,000 to handle seventy-five tons of pulp per day and employ not less than 200 hands on an average of ten months in the year. Crown timber dues of 40 cents per cord for spruce and 20 cents per cord for other woods are to be imposed, the Crown reserving a railway right-of-way, water powers, and granted lands.

Eastern Canada

The pulp and paper mills in Queens County, Nova Scotia, owned by Frank Stanfield, have just been sold to a syndicate.

The Shawinigan Water & Power Company, Power Building, Craig Street, Montreal, P.Q., are contemplating the purchase of 800 thirty-foot cedar poles, to be delivered within the next three months.

The sawmill of B. L. Moore, situated at Moore's Mills, eight miles from St. Stephen, N.B., on the C. P. R., has been destroyed by fire. Another sawmill in the district owned by A. J. Maxwell has also been burned down.

The sawmill belonging to Benjamin Ainsley at Thetford Mines, P.Q., was recently completely destroyed by fire. Very little insurance was carried. The mill will be rebuilt and the company will be in the market for new machinery.

Reports from various parts of the province of Quebec indicate that forest

fires were developing to an alarming extent during the second and third weeks of May. In the neighborhood of Ste. Agathe, an extensive fire broke out and did much damage to a quantity of timber which had been cut during the winter. Fires in various parts of the province were so extensive that the smoke was interfering greatly with shipping between Quebec and Montreal.

The Minister of Crown Lands for the province of Quebec has now given out details of the timber limits which are to be put up at auction on behalf of the government. Those which are to be sold on August 11 comprise limits, some of them up to 2,000 square miles in area, in the regions of the Ottawa, Harrican and Bell Rivers, Lake St. John, Rimouski, Matane, Bonaventure and Gaspé. The sale on October 20 will be of limits along the Mistassini, Ashpamouchouan and Rat Rivers. A condition of the sale of each limit is that a pulp mill must be erected on it within three years, of a capacity of five tons per day for every one hundred miles of limits.

Western Canada

The new mill erected by Carney & Benzie at Benton Siding, B.C., was recently completed and is now being operated.

Houston and Hanley have nearly completed the erection of their planing mill at Redcliff, Alta. The mill is to cost \$6,000.

The mill of the McLelan Lumber Company, Ladner, which has been idle for some months, has resumed cutting. It has a capacity in excess of 50,000 feet per day.

The plant of the Canadian Pacific Lumber Company, Port Moody, B.C., resumed operations on May 11th. Approximately 200 men will be given steady employment at the mill.

The city of Winnipeg has awarded a contract for cedar poles to Tomlinson and Mitchell, 711 Union Bank Building. The contract includes 500 forty-foot cedar poles at \$5.85 each and 100 forty-five foot poles at \$8.20.

The Shull Lumber & Shingle Company are considering the erection of a shingle mill with a capacity of one million shingles daily at Vancouver, B.C. The company's head office is at Everett, Wash. The mill will have an equipment of 24 shingle machines.

Timber limits on the north end of Vancouver Island have been sold to H. A. Whitney and H. W. Treat, of Seattle, for \$127,500. These were bought from Hampton & Edgar, who four months ago bought them from W. R. B. Ford, J. J. Hallway and R. B. A. Rogers, for \$98,000.

The Dunlop Pulp & Paper Mills, Limited, has been incorporated with head office at Selkirk, Man., and capital of \$1,000,000. Among those interested are F. A. Dunlop, 316½ Donald Street, and T. McHattie, 846 Main St. The company is given power to buy, sell and manufacture pulp and paper.

Fire at Three Valley Mill, twenty miles west of Revelstoke, recently destroyed three and a half million feet of lumber piled in the yards. The estimated loss is \$35,000, covered by insurance. The mill was not damaged. Three Valley Mill is the property of the Forest Mills of British Columbia, Ltd.

The Hunting-Merrett Lumber Company, have awarded a contract for the erection of a sawmill at Eburne, B.C., to cost \$45,000. The general contractors are The Heaps Engineering Company, 325 Front Street, New Westminster, B.C., the superintendent of the work being Mr. J. J. Daley. The architect is Mr. D. B. Campbell, 413 Granville Street, Vancouver, B.C. The above-mentioned cost includes the building and machinery.

At the annual meeting of shareholders and directors of the Yellowhead Pass Lumber Company, Limited, Cranbrook, B.C., which was recently held, a report was presented showing total assets of \$715,524 and liabilities, including capital stock, of \$208,163, thus showing an excess of assets over liabilities of \$507,361. The report showed that the general financial situation of the company was very satisfactory. The president, Mr. A. Carney, Kaslo, B.C., and the other officers were re-elected. Mr. A. E. Watts and Mr. Isaac Burch were added to the board of directors.

Mr. Justice Morrison of the Supreme Court of British Columbia has confirmed the contract between the Western Canada Trust Company as receivers for the debentures—holders of the Ocean Falls Company and Messrs. Fleishacker Bros. and Johnston, of San Francisco, by which the large plant of the Ocean Falls Company, situated 200 miles north of Vancouver is to pass under the control of a merger of the Pacific Coast Pulp and Paper interests. The contract is reported to have been endorsed by the debenture-holders at a recent meeting in London, England. The plant is one of the largest on the coast and is equipped with modern machinery for producing 140 tons of dry pulp per day. The sawmill in connection with the plant has been in active operation for some time. It is expected that the pulp plant will be again in operation in the near future. The Fleishhacker interests already control a large pulp mill on Quatsino Sound and another on Howe Sound, together with other pulp mills at various points on Puget Sound.

Trade Enquiries

The Dominion Government Trade and Commerce reports contain the following trade enquiries. Readers of the "Canada Lumberman" may obtain the names of enquiries by writing to the Department of Trade and Commerce and stating the number of the enquiry.

391. Lumber.—A well-established commission house in Barbados inquires for Canadian exporters of lumber.

398. Wood splints.—A Staffordshire firm inquires for exporters of splints suitable for match making.

423. Timber.—A Newfoundland lumber firm asks to be put in touch with British Columbia suppliers of timber and firm boards, etc.

441. Wood, box shooks.—A Durban firm of importers asks for samples and prices with full particulars on Canadian-made box shooks.

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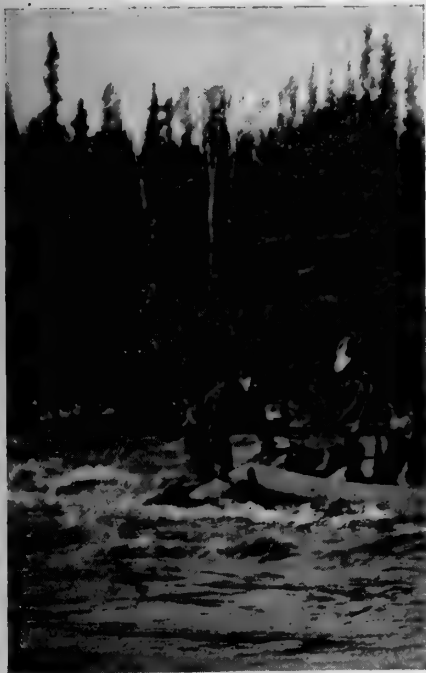
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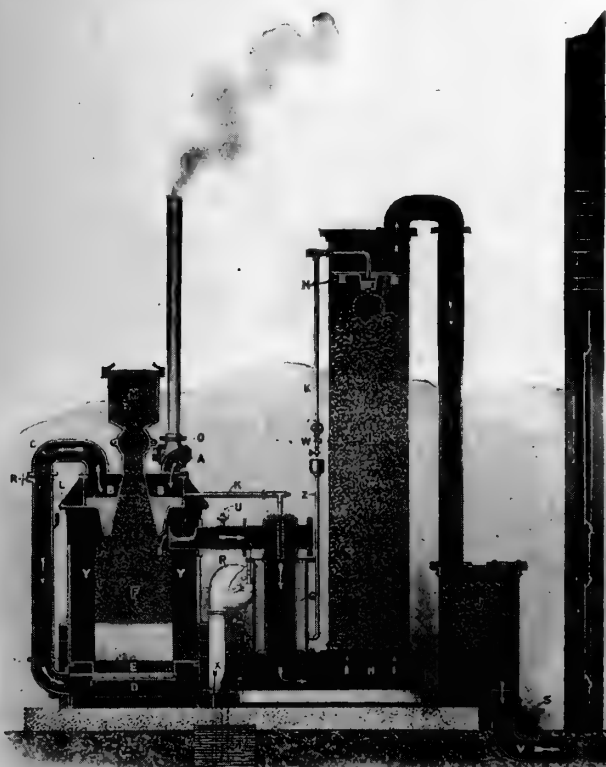
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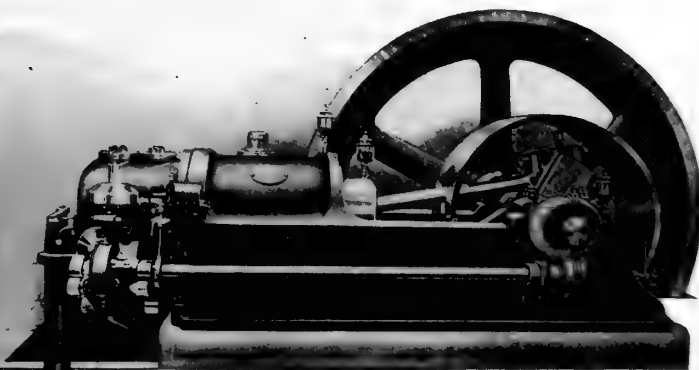
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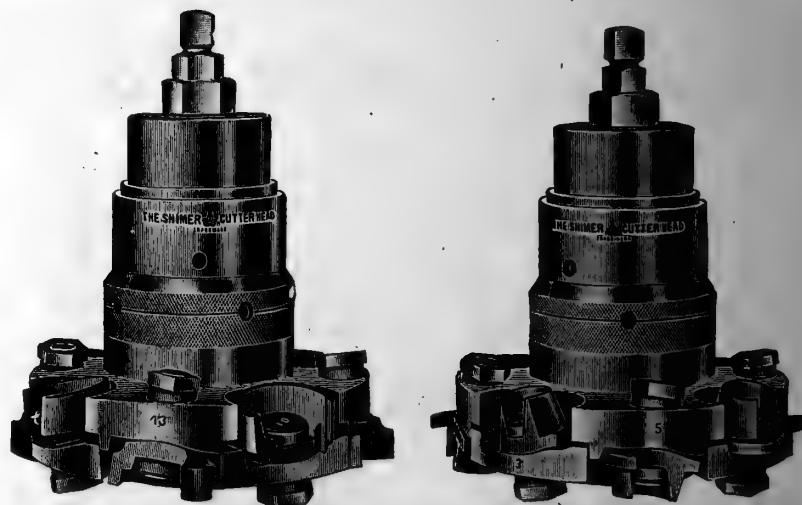
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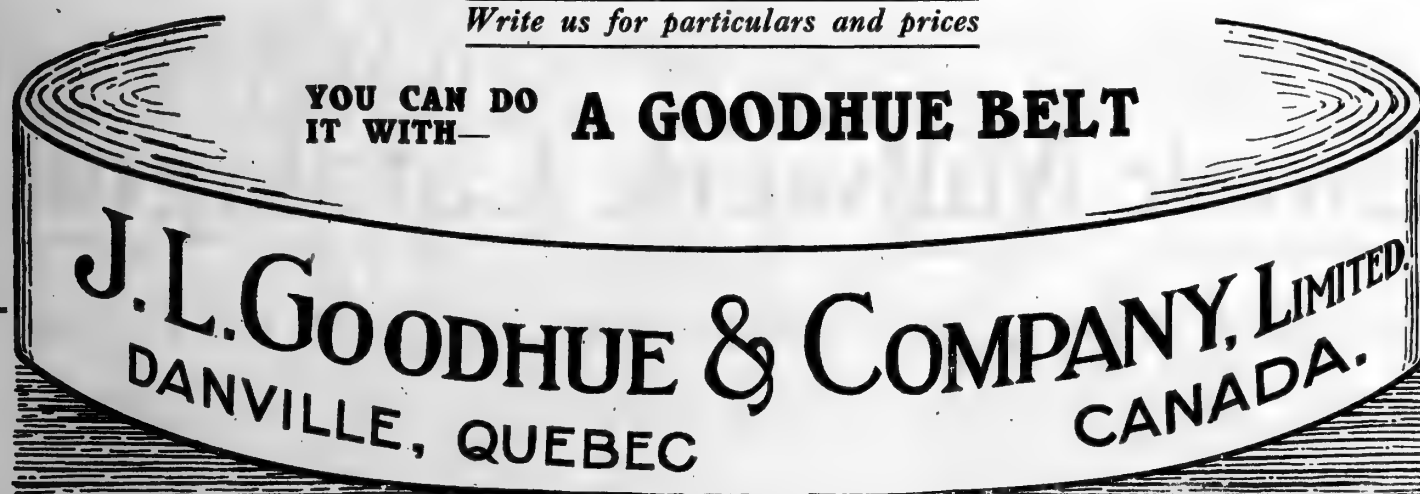
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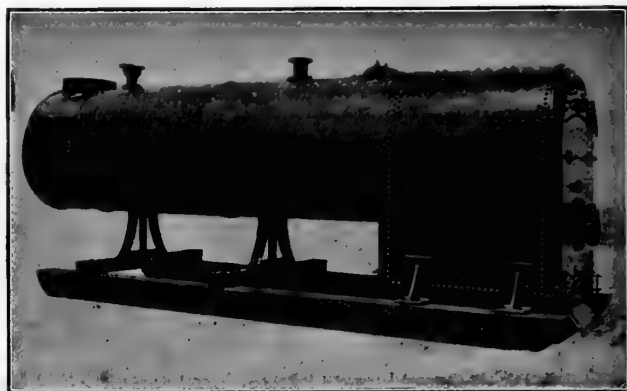
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5/4 and 6/4 No. 1 cuts	52 00	52 00
8/4 No. 1 cuts	55 00	55 00
4/4 No. 2 cuts	36 00	36 00
5/4 and 6/4 No. 2 cuts	42 00	42 00
8/4 No. 2 cuts	45 00	45 00
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8/4 No. 3 cuts	33 00	33 00
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2 x 4 to 12-in., 20 ft.	27 00	27 00
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2 x 4 to 12-in., 18 ft.	24 00	24 00
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Dimensional Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	32 50	32 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	33 00	33 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	33 50	33 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	34 00	34 00
10x20, up to 32 ft.	34 50	34 50
6x18, 8x18, up to 32 ft.	35 00	35 00
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XXXXXX	3 70	3 70

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Ash, brown, 1sts and 2nds, 4/4	50 00	50 00
Ash, brown, common and better	58 00	58 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00	60 00
Birch, 1sts and 2nds, 4/4	59 00	59 00
Birch, No. 1, com. and bet., 4/4	53 00	53 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00	45 00
Birch, 1sts and 2nds, 16/4	50 00	50 00
Basswood, 1sts and 2nds, 4/4	40 00	40 00
Basswood, No. 1 com. and bet., 4/4	35 00	35 00
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00	32 00
Soft elm, 1sts and 2nds, 4/4	40 00	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00	34 00
Soft elm, No. 2 and 3, common	17 50	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00	55 00
Rock elm, No. 2 com. and bet. 6/4 and		

8/4	37 00	37 00
Soft maple, 1sts and 2nds, 4/4	33 00	33 00
Soft maple, com. and bet., 4/4	28 00	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00	35 00
Hard maple, 1sts and 2nds, 4/4	37 00	37 00
Hard maple, common and better, 4/4	30 00	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00	70 00
Red oak, plain 1st and 2nds, 4/4	62 50	62 50
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, plain, 1st and 2nds, 4/4	62 50	62 50
White oak, plain, 1sts and 2nds, 1½ and 2-in.	70 00	70 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4	85 00	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00	88 00
White oak, ¼ cut No. 1 common	55 00	55 00
Hickory, 1sts and 2nds, 4/4	70 00	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1½-in. & 1½-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. & up	40 00	42 00
Pine good strips:		
1-in.	40 00	42 00
1½-in. and 1½-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1½-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1½, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	20 00
Pine, s.c. and bet., shorts, 1 x 5	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11" 1"x10"	24 00	25 00
Pine, box boards:		
1" x 4" and up, 6'-11"	18 00	19 00
1" x 3" to 6", 12'-16"	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up		
Pine mill culls stock 1 x 12	17 00	19 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	16 50	17 00
O. culls r & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7"		
and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11"	17 00	18 00
1"x4" and up, 12'-16"	18 00	20 00
1"x9" x 7" and up, 12'-16"	22 00	24 00
1½"x10" 8-9" and up, 12'-16"	22 00	24 00
1½"x10" and up, 12'-16"	22 00	24 00
1½"x12" and up, 12'-16"	25 00	26 00
Spruce 1-in. clear (fine dressing and B)		
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16"	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out		
Basswood log run mill culls out	22 00	24 00
Birch log run	19 00	22 00
Soft elm, common and better,		
1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	65	70
Oak—Michigan and Ohio		
By the dram, according to average and quality	60	70
Elm		
By the dram, according to average and quality, 40 to 45 feet	75	80

By the dram, according to average and quality, 30 to 35 feet 50 60

Ash

13 inches and up, according to average and quality, per cu. ft. 25 30
Average 16 inch 30 40

Birch

14 inch, per cu. ft. 20 23
15 inch, per cu. ft. 24 26
16 inch, per cu. ft. 28 30
18 inch, per cu. ft. 32 35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. \$20 00 21 00
Oddments 17 00 18 00
Boards, 1 and 2 in. 16 00 18 00

Birch Planks

1 to 4 in. 16 00 18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. \$54 00
1 in., 8 in. and up wide 62 00
1½ and 1½ in. and up wide 65 00
2 in. and up wide 70 00

Cuts and Better

4/4 x 8 and up No. 1 and better 55 00
6/4 x 8 and up No. 1 and better 65 00
8/4 x 8 and up No. 1 and better 65 00
6/4 x 6 and up No. 2 and better 52 00
8/4 x 6 and up No. 2 and better 54 00
6/4 x 6 and up No. 3 and better 46 00
8/4 x 6 and up No. 3 and better 50 00

No. 1 Cuts

1 in., 8 in. and up wide 42 00
1½ in., 8 in. and up wide 55 00
1½ in., 8 in. and up wide 57 00
2 in., 8 in. and up wide 60 00
2½ and 3 and 8 in. and up wide 75 00
4 in., 8 in. and up wide 85 00

No. 2 Cuts

1 in., 6 in. and up wide 81 00
1½ in., 6 in. and up wide 42 00
1½ in., 6 in. and up wide 44 00
2 in., 6 in. and up wide 47 00
2½, 3 and 4 in., 6 in. and up wide 62 00 65 00

No. 3 Cuts

1 in., 6 in. and up wide 24 00
1½ and 1½ in., 6 in. and up wide 33 00
2 in., 6 in. and up wide 33 00
2½, 3 and 4 in., 6 in. and up wide 43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in. 24 00
1-in. x 5-in. 25 00
1-in. x 6-in. 26 00
1-in. x 8-in. 27 00
1-in. x 10-in. 29 00
1-in. x 12-in. 34 00
1 in. x 18 in. and up 34 00
1½, 1½ and 2-in. 30 00

No. 1 Barn

1 inch 31 00 45 00
1½, 1½ and 2-in. 36 00 45 00
2½ and 3-in. 45 00
4 inch 50 00

No. 2 Barn

1 inch 28 00 36 00
1½, 1½ and 2-in. 30 00 38 00
2½ and 3-in. 38 00

No. 3 Barn

1 inch 21 00 28 00
No. 1, 1, 1½, 1½, 2-in. 20 00 25 00

Box

No. 1, 1, 1½, 1½, 2-in. 22 00 25 00
No. 2, 1½, 1½, 2-in. 19 00 23 00

Mill Culls

Mill run culls, 1-in. 19 00
1, 1½, 1½ and 2-in. 20 00
No. 2 17 00 18 00

Lath

No. 1, 32-in. pine 1 75
No. 2, 48-in. pine 4 00
No. 1, 48-in. pine 4 75
No. 3, 48-in. pine 3 50
No. 1 48-in. hemlock 3 25

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimensions, Rough or S. 1 S. and 1 E.
6 ft. 8 ft. 10 ft. 14x16 ft.
2 x 4 15 00 18 00 22 00 20 00
2 x 6 18 00 18 00 22 00 20 00
2 x 8 18 00 18 50 22 00 20 00
2 x 10 19 00 19 50

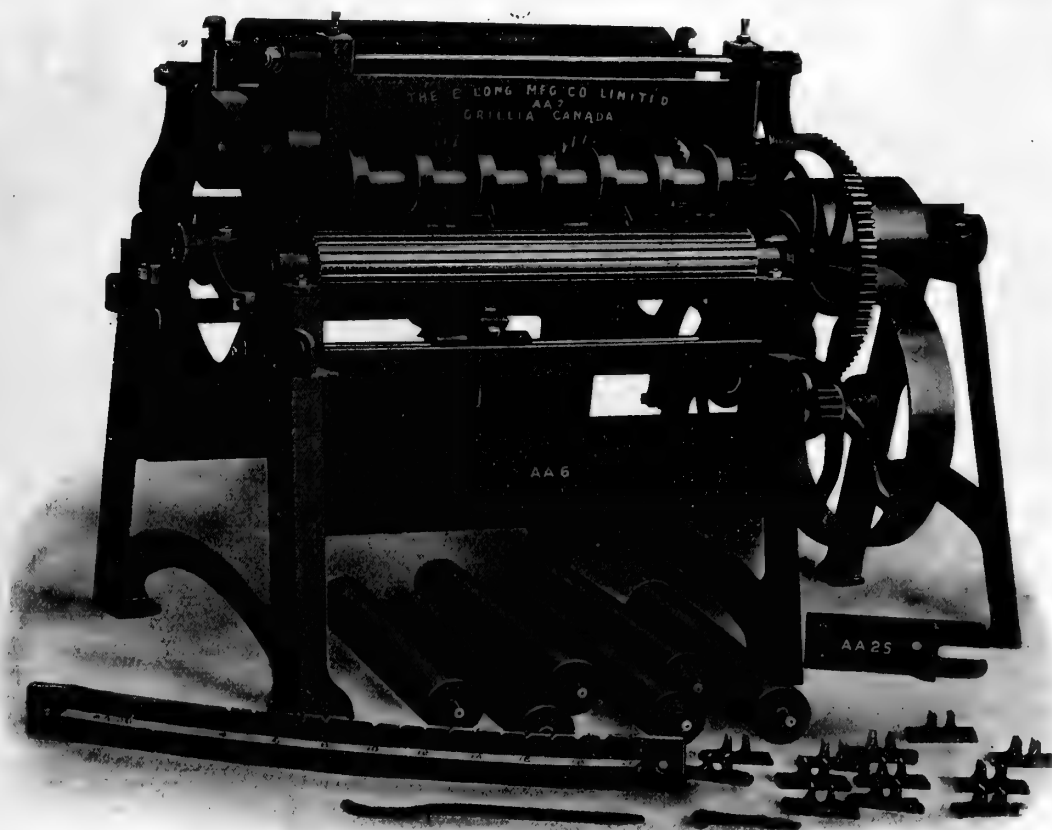
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HIGH GRADE PORTABLE MILLS

Mills that are simple in design, efficient in operation, and that stand up in service.

Consult us freely on your sawmill problems.

Catalogs and Bulletins for the asking.



Our 32" Edger is a favorite with portable mill men.

The E. Long Manufacturing Co., Limited, Orillia, Canada

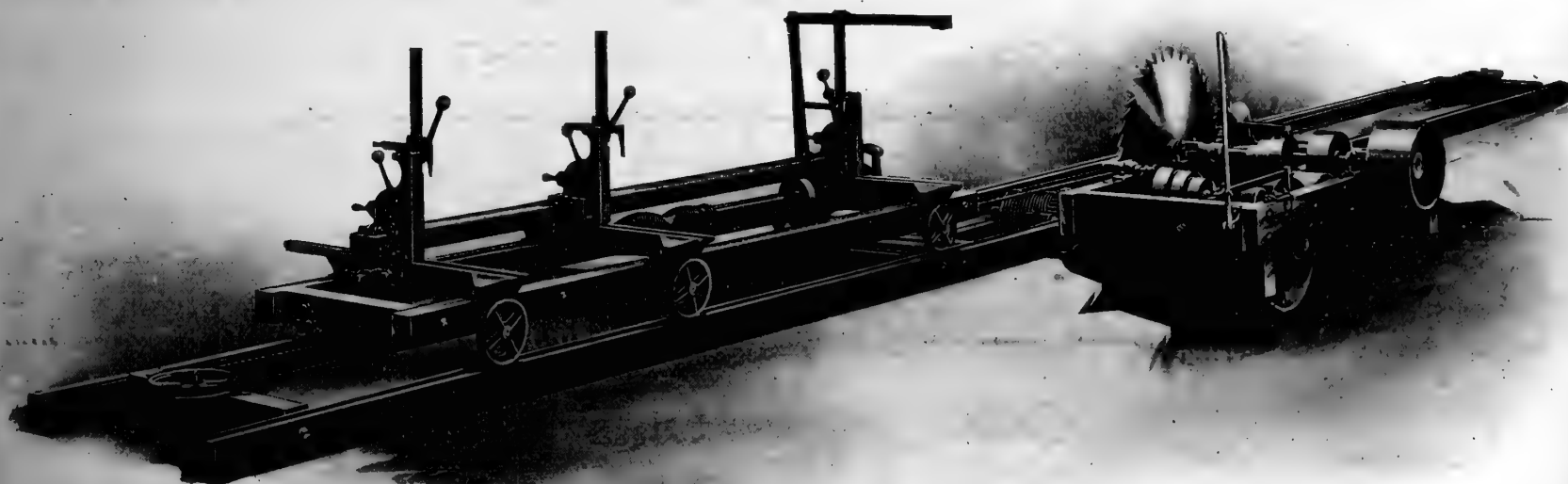
Robt. Hamilton & Co., Vancouver

Represented by:

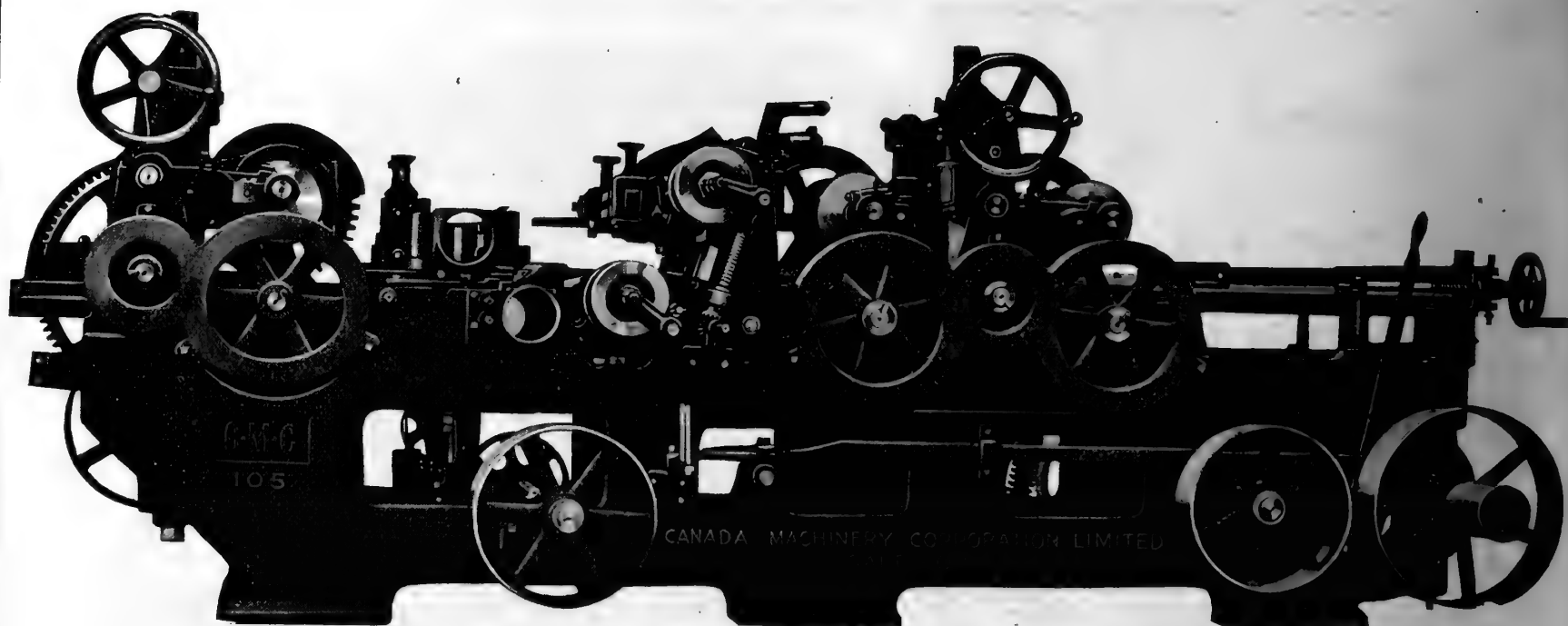
Gorman, Clancey & Grindley, Limited, Calgary and Edmonton

Stuart Machinery Co., Ltd., Winnipeg

Williams & Wilson Ltd., Montreal



See additional Ad on page 78

PLANER &**MATCHER**

15" Double Cylinder Planer and Matcher

Our No. 105 machine is a general purpose, medium heavy machine, especially suited for the general planing mill.

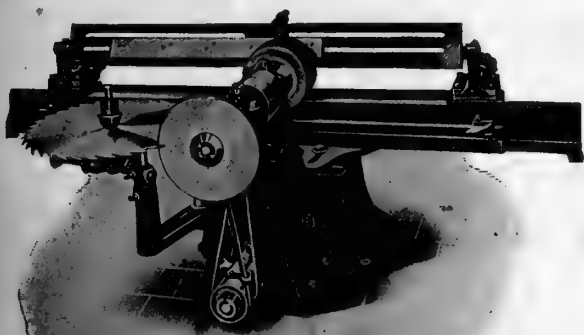
The feed range is from 45 to 100 feet per minute. Planes and matches 15" wide by 6" thick.

Full details and description contained in bulletin No. 105, sent on request.

Canada Machinery Corporation, Limited

Galt - Ontario

Largest Builders of Woodworking Machinery in Canada



**This Type "E"
Knife Grinder
and
Saw Gummer**

is the smallest size we make. A practical up-to-date Bench Grinder at \$65.00.

We make other grinders for sharpening knives up to 130-in. length.

Write for catalog showing the complete Rogers-Buffalo line.

SAMUEL C. ROGERS & CO.,
18 Lock Street :::: **BUFFALO, N. Y.**

CONSIDER the cost of labor in any painting job as against the price of paint. Make up your mind that a more durable paint like

DIXON'S SILICA GRAPHITE PAINT

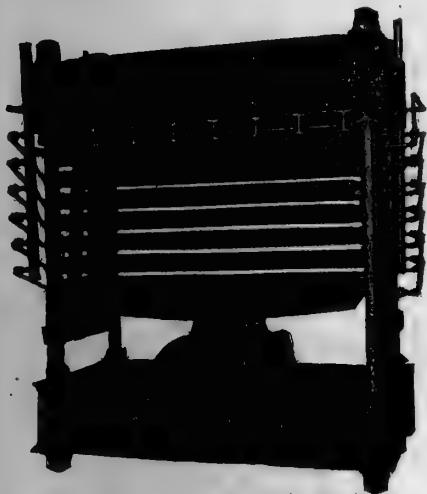
lengthens the intervals between repainting and saves in the cost of labor. Booklet No. 238-B upon request.

FOR EXPOSED METAL SURFACES OF ALL KINDS

Made in JERSEY CITY, N. J. by the

Joseph Dixon Crucible Company

Established 1827



**Veneer Press
and Dryer**

Hydraulic and other Presses for mill and factory use. Built in all sizes or to suit special conditions

WRITE FOR FRIS
AND QUOTATIONS

**William R. Perrin
and Company, Ltd.**
TORONTO, CANADA

**WIRE and
WIRE PRODUCTS for
Lumber Shippers, Pulp Mills, Shook Mills, etc.**

We stock Extra Strong Annealed Wire for Car Stakes, etc., Bundling Wire for Box Shooks, Laths, Pickets, Boards etc., and Wire Ties for Barrel and Keg Heading and Staves.

Wire Bale-Ties, Single Loop and Crosshead Patterns, Wire Nails, Wire Staples, Wire Barrel Hoops. Write for Prices.

Sole Manufacturers for Canada of the Carnegie Steel Company's Patent Steel Hoop for all slack cooperage.

The Laidlaw Bale-Tie Co., Limited

Winnipeg
Harry F. Moulden & Son

HAMILTON,
ONTARIO

Vancouver
George W. Laidlaw



PERFECT GROOVES

Any width, with or across grain. Rapid, no screw adjustment. Guaranteed to give satisfaction on all classes of work.

Huther Bros. Dado Head can be used on any circular saw mandrel and is adjusted in the time it takes to remove a saw. Sent on approval. Write for complete description and catalog.

Patented Nov. 29-1892
July 19-1910

HUTHER BROS. SAW MFG. COMPANY, Inc., 1103 University Ave.
ROCHESTER, N. Y.

The Peter Hay Knife Co., Limited
GALT, ONTARIO



MANUFACTURING WOODWORKING

**Machine Knives, Circular Cutters
and Mortise Chisel**



Exhaust Systems

We design and install Exhausting Systems for Planing Mills, Shoe Factories, Pulp Mills, Grinding and Buffing Plants, or for any business where it is desired to exhaust foul air or convey materials by means of fans. We will be pleased to have enquiries.

Geo. W. Reed & Co., Ltd., Montreal

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	43 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24
RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22
SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22
BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23
PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27
ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26

BOSTON, MASS.			
White pine uppers, 1 to 2 in.	92 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00		
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00		

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00	1 1/4-in. spruce laths	4 15	4 25
Barn Boards, No. 1, 1 x 12	48 00	50 00	1 1/2-in. spruce lath	3 75	3 80
No. 1, 1 x 10	37 00	38 00	New Brunswick Cedar Shingles		
No. 1, 1 x 8	37 00		Extras	3 50	3 65
No. 2, 1 x 12	38 00	40 00	Clears	3 10	3 10
No. 2, 1 x 10	34 00	35 00	Second clears	2 75	2 90
No. 2, 1 x 8	33 00	34 00	Clear whites	2 60	2 60
No. 3, 1 x 12	31 50	32 00	Extra 1s (Clear whites out)	1 80	1 80
No. 3, 1 x 10	29 00	30 00	Extra 1s (Clear whites in)	1 00	1 00
No. 3, 1 x 8	29 00		Red Cedar Extras, 16-in. 5 butts	3 50	3 55
Canadian spruce boards	25 00		to 2-in.		
Spruce, 10 in. dimension	26 50	28 00	Red Cedar Eurekas, 18-inch	4 25	4 25
Spruce, 12 in. dimension	27 50	29 00	5 butts to 2-in.	4 80	4 80
Spruce, 9 in.	25 00		Red Cedar Perfection, 5 butts		
Spruce, 8 in. and under dimen.	24 50	25 00	to 2 1/4		
10 and 12 in. random lengths,	25 50	26 00	Washington 16-in. 5 butts to 2-in. extra red clear	3 50	3 60
10 ft. and up			The Pearl City Veneer Company, James-		
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7	21 00	22 50	town, N.Y., report prices of veneers as fol-		
and 3 x 4 random lengths, 10			lows. 1/30-in. maple, \$3.75 per M. feet; 1/24-		
feet and up			in maple, \$4.00 per M. feet; 1/20-in. maple,		
All other random lengths, 7-in.	21 00	21 50	\$4.25 per M. feet; 3/16-in. 8-ply maple, sand-		
and under, 10 ft. and up			ed one side, 3 1/4 c. per ft.; 1/4-in. 8-ply maple,		
5-inch and up merchantable			sanded one side 4c per ft. All F.O.B. James-		
boards, 8 ft. and up, p 1s	23 00		town, New York.		
1 x 2 and 1 x 3 furring, p 1s					
clipped and bundled	23 00				

Cling-Surface effects savings in more ways than you can imagine

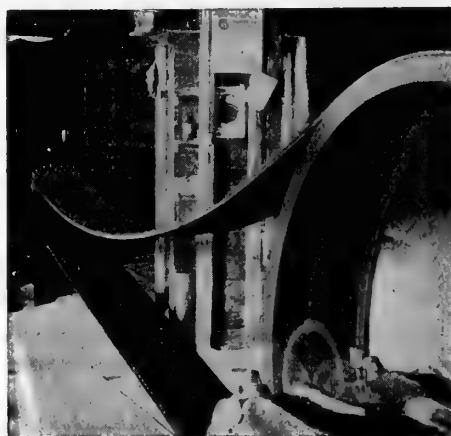
Savings from the use of Cling-Surface pop up from many sources: Where belt slip is stopped without tightening belts and its attendant useless increase of bearing pressures, coal is saved in quantities, year in and year out, that pays for the Cling-Surface and its application dozens of times over. Cling-Surface treatment more than doubles or trebles the life of belts that otherwise are run tight, for the pliability and softness which it imparts to both interior and exterior permit the belt to run slack with less slip than is present in a tight belt.

The truth of these statements is forcibly emphasized in the following remarks of Mr. Jerry Lynch, 196 East 205th Street, New York, a self-styled "Cling-Surface Bug" who was put in charge of M. P. Davis' plant, Niagara Falls, Ont., where belts were once run extremely tight.

"They burned out many sets of main bearings on those compressors. After Cling-Surface came, I asked them to allow the belts to go on without taking up, which they did. We cut the oil bill from five gallons a day to five gallons a week and once ran for over three months without stopping, and no trouble."

Mr. Lynch was there 25 months. During that time they need only one gallon of Cling-Surface.

This is perhaps an exceptional case,



and an extremely high oil-saving record. But it is important in helping to prove Cling-Surface treatment the logical solution for belt troubles.

Belts partially ruined because of wrong treatment or no treatment can still be reclaimed with Cling-Surface, which, supplied correctly, nourishes all the good still in them and checks the deterioration. Ask anyone who is using Cling-Surface. Give Cling-Surface a trial or at least write for more information today.

We quote f.o.b. Toronto.



Cling-Surface Co

1021 Niagara St Buffalo NY
New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 91

Support Home Industries

The Canada Metal Co., Ltd.,
Manufacture in Canada—



Harris Heavy Pressure

"The babbitt metal without a fault"

The prime favorite with all engineers

The best babbitt for all general machinery bearings

Manufactured and Guaranteed by

Canada Metal Co., Limited

Head Office and Factory, Toronto, Ont.

Branch Factories: Montreal, Winnipeg

Order a Box From Our Nearest Factory

"AJAX" The World's Strongest Chain



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs.
(See how this Chain stretched before breaking.)

Do your log loading with the "Ajax" loading chain, every link of which is guaranteed. The illustration tells a convincing story.

Manufactured only by

Standard Chain Company
Pittsburgh, Pa.

The World's Largest Chain Producers.

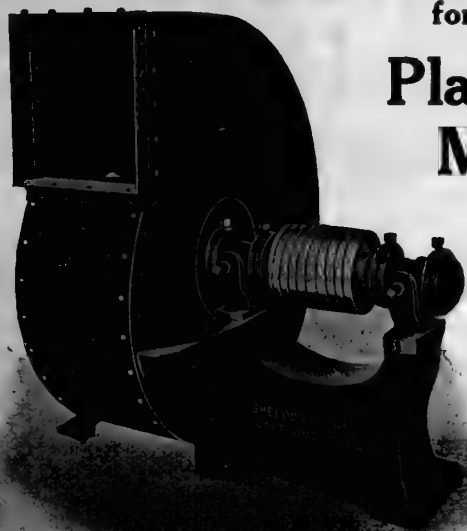
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Winnipeg: Bissett & Loucks.

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SHAVING EXHAUST FANS

for the
**Planing
Mill**



The Sheldon Shaving Exhaust Fan is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

Sheldons Limited - Galt, Ontario

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WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock

Shiplap
Box Lumber

Boards

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

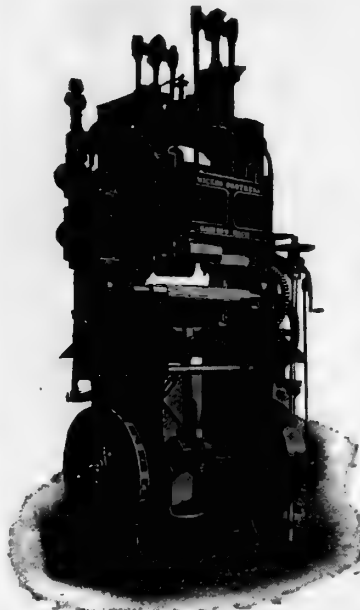
JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbng (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and **CARRIAGE** entirely, raise your cutting capacity, and install economy by the same stroke.

Not an **EXPERIMENT**, but an **ECONOMIC NECESSITY**.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."



Wickes Brothers

410 White Building

SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

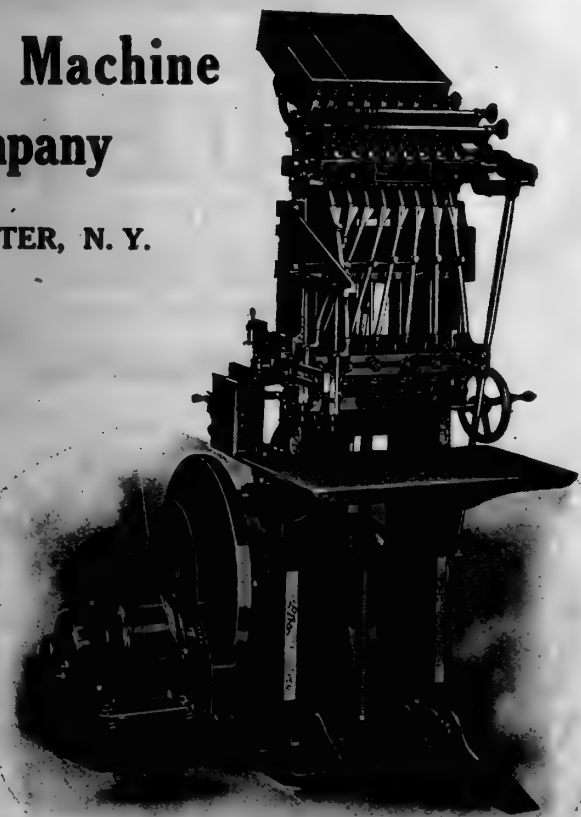
Manufacturers
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Nailing
Machines,

Lock Cor-
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Machinery,

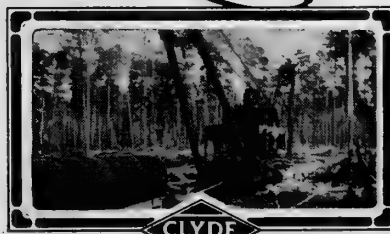
Box Board
Matchers,

Box Board
Printing
Machines.



Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.

**HORSELESS SKIDDING**

Skidding with mechanical rehals to return lines to the woods is becoming more and more popular. Greater speed and independence from weather conditions constitute the principal reasons for this:—

YOU WILL BE INTERESTED IN HEARING & SEEING WHAT OTHERS ARE DOING WITH CLYDE MECHANICAL REHAUL SKIDDERS. Write us and we will arrange to Show you

CLYDE IRON WORKS
DULUTH, U. S. A.



Are your horses of use to you?

This seems an absurd question—and the answer is always
"Of course they are"—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	\$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic	
1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz.

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.
----------------	---------------

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.



Good Lumber HORSES

Should be free from all blemishes

Use

ABSORBINE

for Wind Puff, Capped Elbow, Bog Spavin, Thoroughpin, Shoe Boil, Curb, Enlarged Glands and all puffs and swellings, Fistula, Poll Evil, Sprains, Contracted Tendons, Bruises, Lameness of all kinds.

ANTISEPTIC

You cannot get good work out of your lumber horses if they are lame, blemished, sore, sick or similarly unfit. The animal with Swellings, Soft Bunches, Bog Spavins or any such blemish, whether lame or not, needs your attention.

ABSORBINE

best friend—it relieves the horse of all pain, soreness and troublesome blemish. It makes the horse better looking, better working, more fit and of greater value to you. You can work your horse at the same time. This is no new lotion but the tried and tested remedy of many years successful use. Thousands upon thousands of horses which would have been ailing and sick and unsightly have been made fit and well—good workers and good lookers. What others have done with Absorbine you can do, too. All enquiries on special cases answered without delay—full information and instruction on request. Absorbine \$2.00 a bottle at druggists or delivered.

Manufactured only by

ABSORBINE

does not blister or remove the hair, never leaves scars or blemishes of any kind.

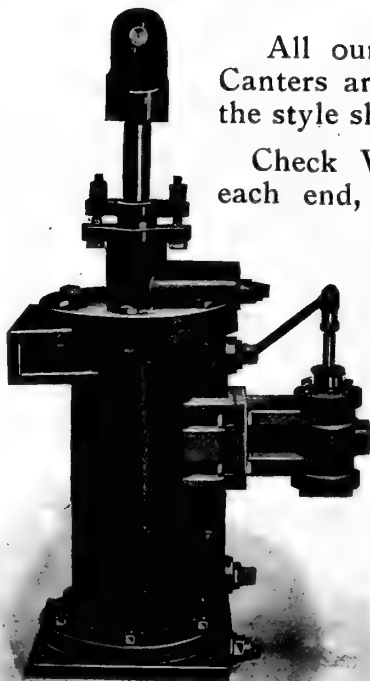
It is easy to apply and does not require the horse to be laid up.

Highly concentrated and only a few drops required at each application.

GERMICIDE

W. F. YOUNG, P. D. F.
424 Lyman's Bldg. MONTREAL, CAN.

Log-Handling Machinery



All our Loaders, Kickers and Canters are made with cylinders of the style shown in the cut.

Check Valves are provided in each end, and all piping between valve and cylinder is eliminated. These cylinders are extra heavy and very durable, and are absolutely guaranteed by us.

We carry in stock at all times a complete line of Log Deck Machinery—so we can always serve you promptly.

Shall we send our Catalogue?

William Hamilton Company
Peterborough - Ontario

WE CAN

DOUBLE

THE CAPACITY OF YOUR

DRY KILN

GRAND RAPIDS VENEER WORKS

Dry Kiln Service

**MEANS
TO
YOU**

A Practical Theory
Competent Engineering
Effective Organization
Years of Experience
Guaranteed Results

Grand Rapids Veneer Works

Grand Rapids,
Michigan

Galt Knife Company, Limited

High Grade Machine Knives

of every description for Woodworking Plants and
Pulp and Paper Mills—also

Metal Cutting Shear Blades up to 120-in. long

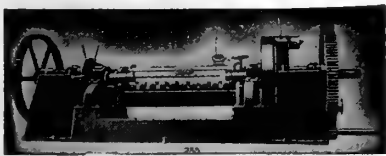
Our New Catalog will be ready about June 1st. Ask for a copy.

GALT : Nothing But the Best Satisfies us. : ONTARIO
What About You.

MERRITT MFG. CO., Lockport, N.Y.

Veneer Machinery

THE "MERIT" LINE of Veneer Cutting, Dimensioning and Drying Machinery is designed first, for veneer mills cutting high grade furniture and commercial veneer from expensive timber, and second, for basket, crate, box and barrel factories using cheaper veneer cut from the less expensive woods.



Merit Veneer Lathe

In addition to Lathes, Clippers, and Driers, the line, includes Knife Grinders, Log Hoists and Trolleys, a set of Crate Head Machinery, a set of Barrel and Basket Hoop Machinery, Basket and Hamper Bottom Rounders, Nailing Forms, etc.

"PROCTOR" VENEER DRYER



"No checks or splits in veneers dried in the
"Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

Send for Bulletin No. 4

THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.



RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "Monarch," "Red Strip" and "Lion" are our leading brands for power transmission. (Write for Booklet B-1.)

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable. (Booklet P-1.)

Hose for Steam, Water, etc., etc., in various grades, made especially to give satisfactory and economical service under different conditions. (Booklet H-1.)

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion. (Booklet H-1.)

Gutta Percha & Rubber, Limited

Successors to

The Gutta Percha & Rubber Mfg. Co. of Toronto, Limited

TORONTO

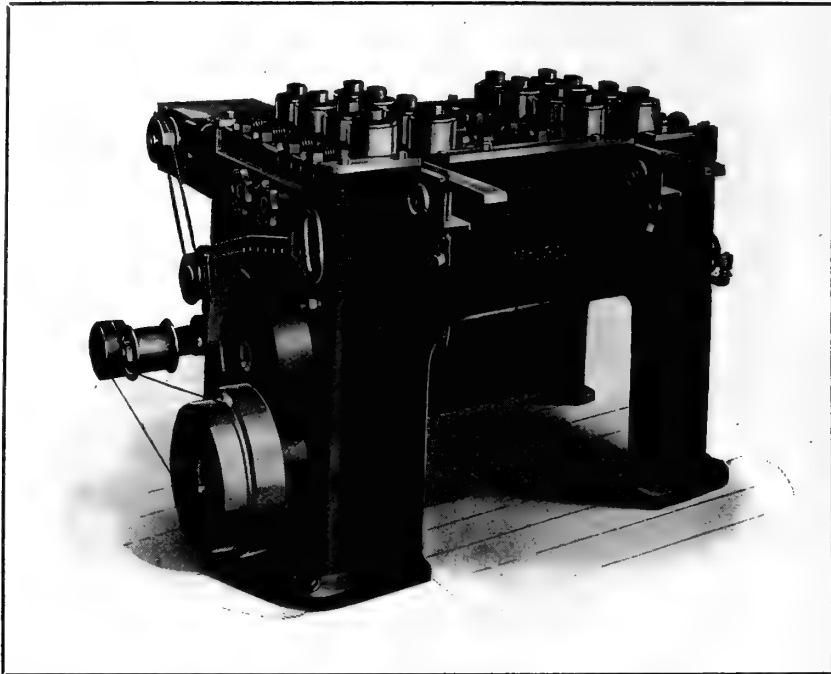
MONTREAL

WINNIPEG

CALGARY

VANCOUVER

Improved Box Board Matcher



16 driven feed rolls, $4\frac{1}{8}$ in. in diameter, each one of which can be adjusted independent of all others.

$4\frac{1}{2}$ in. between centres of first and second pair; $5\frac{1}{2}$ in. between centres of second and third pair (the cutters work between this pair) and $4\frac{1}{4}$ in. between centres of third and fourth pair.

This Matcher is compactly and rigidly constructed with every part readily accessible and the operators are close together when working.

Catalogue gladly furnished which illustrates and describes many other machines built expressly for Box Factories.

Mereen-Johnson Machine Company, **MINNEAPOLIS, MINN.**
U. S. A.

KEEP THE WORK GOING



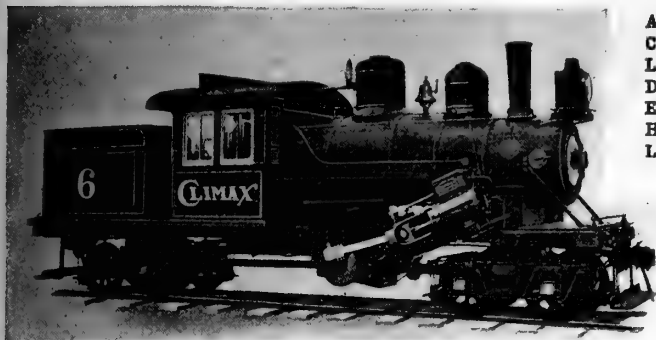
Nothing is more important in logging than the prompt and certain movement of cars.

Delays affect the whole work. To avoid delays, locomotives must be reliable and always ready for service.

Our standard logging locomotives are built to insure reliability and constant service. Only tested materials are used in their construction. All wearing parts are made to templates and gauges. Interchangeability of like parts is guaranteed, and long delays waiting for duplicate parts avoided.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent



Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.



Logging Locomotives

The knowledge and experience of fifty years in locomotive designing and construction is what you get in our Logging locomotives. They are specially constructed for logging operations and will stand up to the severe service in which they are expected to run.

They are as carefully designed and built as our 200 ton locomotives. Repair parts may always be obtained on the shortest notice.

May we send you specifications

Canadian Locomotive Company, Limited, Kingston, Ont.
Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,

December 20th, 1912.

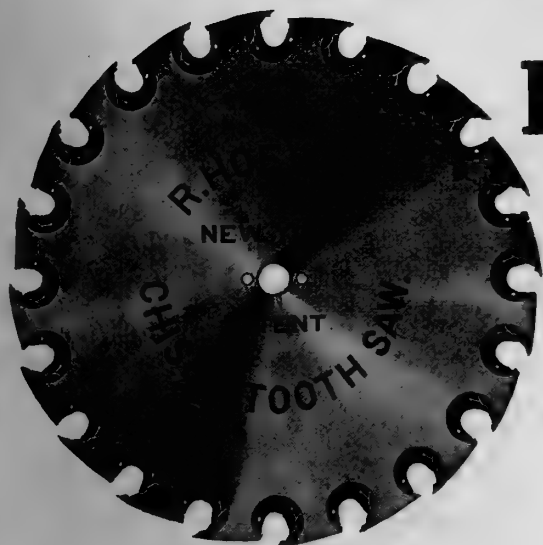
The Genuine HOE Chisel-Tooth Saw

Special Flanged Shanks and Superior Bits for Hardwood

OVER 80,000 NOW IN USE IN ALL PARTS OF THE WORLD

HIGHEST QUALITY

AVOID IMITATIONS

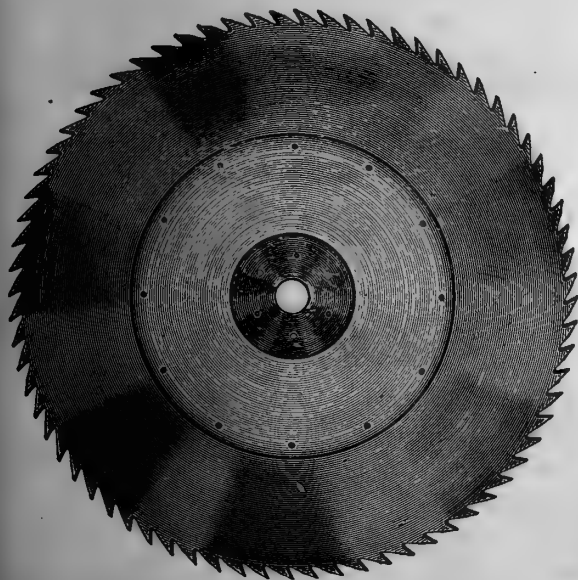


**HOE
HAS
NO
EQUAL**



Write for Saw Catalogue to

R. HOE & CO. 504-520 Grand Street, **NEW YORK CITY**



**Radcliff
Shingle
and
Band Saws**



**"The
Saw
With
The
Keen
and
Lasting
Edge"**

The ability to produce high grade saws is a manufacturing fine art in which we are well informed.

Radcliff saws are without a superior. They are made in all types and sizes. Our shingle and heading saws are of an extra fine grade of steel, made expressly for the purpose, unexcelled for toughness, temper and cutting qualities.

Send for our catalogue.

Radcliff Saw Mfg. Co., Limited
Toronto

**"The
Saw
With
The
Keen
and
Lasting
Edge"**

The Mark*of Quality*

A MACHINE THAT IS WINNING

Our No. 2 Iron Saw Frame, a machine of comparatively recent design, built for **service**, is doing the business and meeting with the hearty approval of exacting mill men everywhere.

A glance at the cut tells half the story. See the rest in the bulletin. A post card will bring it.

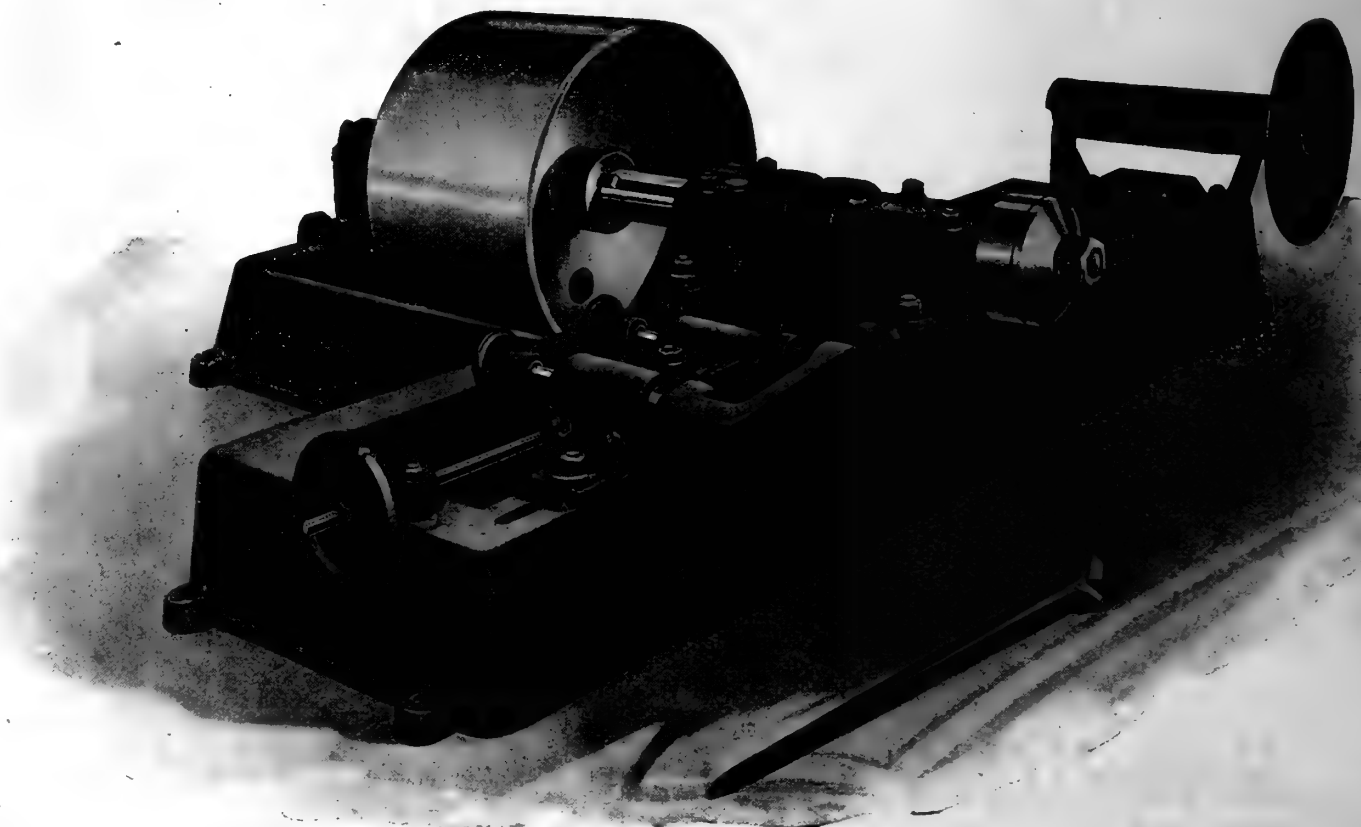
The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver

Gorman, Clancey & Grindley, Limited, Calgary and Edmonton

Represented by:

Stuart Machinery Co., Ltd., Winnipeg
Williams & Wilson Ltd., Montreal



See additional Ad on page 67

"She Sure Does Run Smooth."

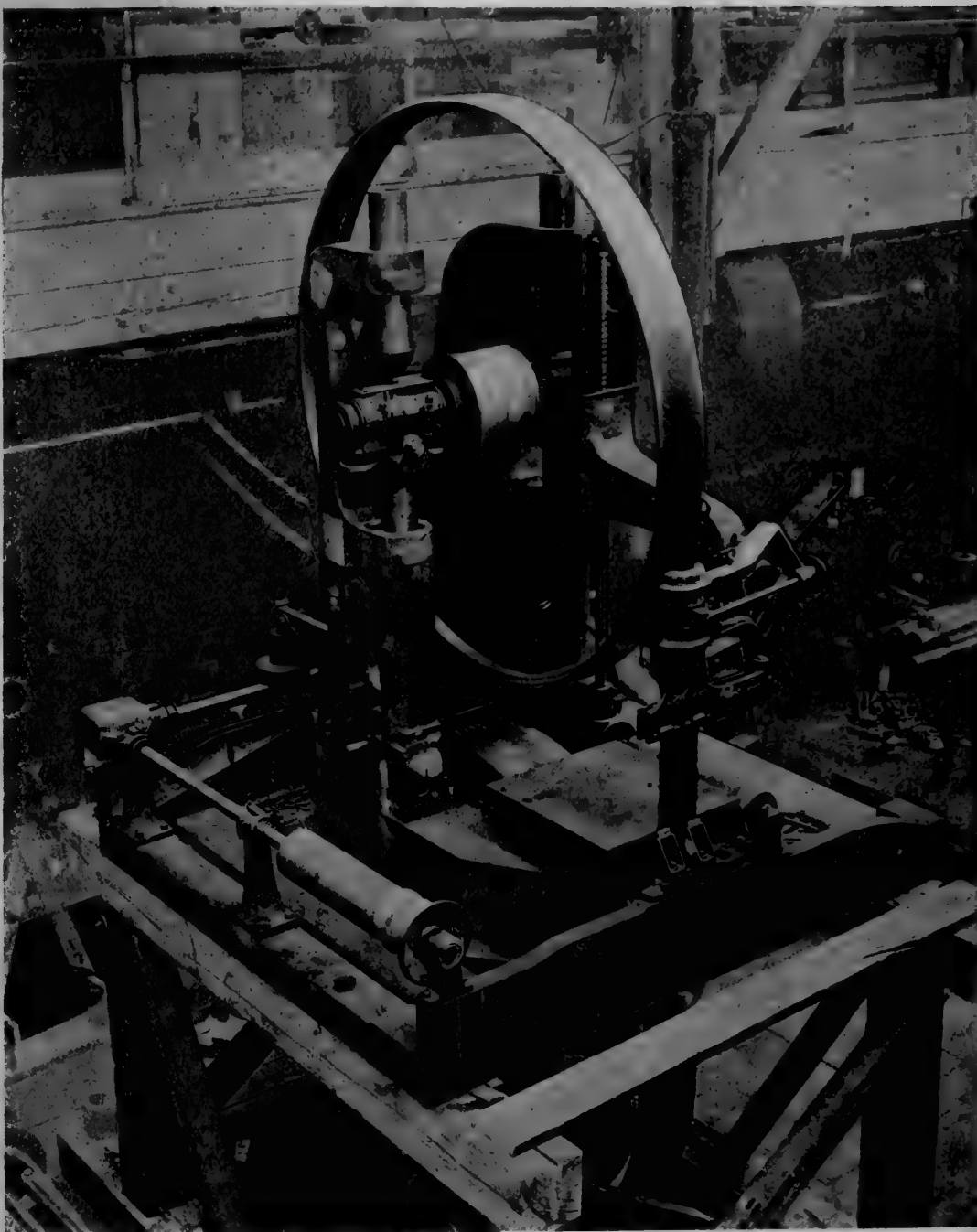
THAT is what a visitor at our works the other day said when he saw this mill being tested. This photo was taken at the time.

It is a 40-second exposure of a Waterous "New Model" Bandmill running at 10,000 feet per minute. It shows the mill running at full speed on the testing platform—without holding-down bolts.

Notice the clearness and sharpness of every detail of the columns, the guides, and of the top wheel.

That shows that there is absolutely no vibration in the mill. It means correct design, accurate construction, and good workmanship.

Do you wonder that we continually harp on the steadiness, the smoothness, and the true running qualities of our mills—or that we have sold more than twenty of them in the last five years?



The Waterous "New Model" Mill

has other outstanding features that are distinctively its own:

- ☐ It is self-contained upon its own frame.
- ☐ All operating mechanism, raising and lowering device, tilting mechanism, etc., are carried within the columns, free from flying sawdust, and always out of the way.
- ☐ Both guides swing about the exact centre of the saw-blade—no other guides on the market have this feature—it is patented.
- ☐ Upper guide is raised and lowered by steam cylinder.
- ☐ Tension device, is double-spring cushioned—the most sensitive device of this kind now in use.
- ☐ Built in 7 ft., 8 ft., 9 ft., 10 ft. and 11 ft. sizes.
- ☐ The mills sold have the endorsement of *every* user. Send us your address and we will refer you to an installation in your vicinity. Let the men who are operating the Mill tell you just how good it is. Their opinion is unbiassed, and we are ready to abide by it.

The
Waterous Engine Works Co., Ltd., Brantford, Can.



"FROST KING" METAL

Our thirty five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

\$5,000,000.00

worth of mixed metal sold annually.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y.

London, Eng.

St. Louis, Mo.

BATTS LIMITED

WEST TORONTO

MANUFACTURERS OF

Staved Columns

Veneered Doors

Newel Posts

Sashes - Flooring

Trim

Pine Doors and
Frames

Turned Newel Posts and
Balusters

Cypress Greenhouse
Material

BATTS LIMITED

MANUFACTURERS

WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
KNOWN

OUR
"EXTRA"



MONTREAL

TORONTO

WINNIPEG

VANCOUVER

The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL



BOILERS

"INGLIS" boilers are the product of over 50 years' experience and study combined with the most modern equipment for boiler making.

"INGLIS" boilers are made in every type and all sizes.

Let us quote on your requirements.

The John Inglis Co., Ltd.

Engineers and Boilermakers

14 Strachan Ave. Toronto, Canada

Montreal Representative—A. Angstrom,
509 Canadian Express Building

Canada Lumberman

Time is Money

The rapid cutting File is the economical File

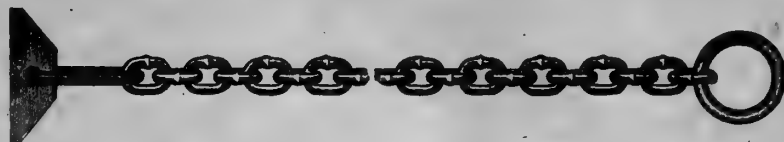
Files Branded

American - Arcade - Eagle - Great Western
Globe - Kearney & Foot - McClellan - J. B. Smith

are rapid cutters made by

NICHOLSON FILE COMPANY

Port Hope, Ont.



Electric-Welded Boom Chain

25% {More Weld} = 25% {More Strength} = 25% {More Wear}

Sheared Toggle and Ring * T Bar Hook and Link * Two Sheared Toggles * Forged Toggle and Ring

Made in Canada

Write to

Fully Guaranteed

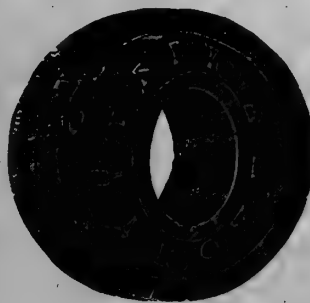
McKinnon Chain Co., St. Catharines, Ont.

Skefko "S. K. F." Ball Bearing

Automatically Self-Aligning

"Ball Bearings in Woodworking Plants," on page 48 of the June 1st Canada Lumberman, gives in a very clear manner some of the advantages of Ball Bearings for power shafting.

In the case of shafting which is not properly



The perfect operation of Skefko S.K.F. Ball Bearings under conditions which would put every other bearing out of business is due to the spherically ground outer raceway of the bearing. Note how the bearing acts like a ball and socket joint.

lined up or quickly gets out of alignment, the ordinary ball bearing is little if any better than a plain bearing.

The Skefko "S.K.F." Double Ball Bearing is automatically Self Aligning and will operate as efficiently under the worst conditions as if the shafting was in proper conditions.

Put your plant on the most efficient basis.
Install Skefko "S. K. F." Bearings.

The Canadian Fairbanks-Morse Co. Limited

Montreal, St. John, Quebec, Ottawa, Toronto, Hamilton, Ft. William, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Vancouver, Victoria.

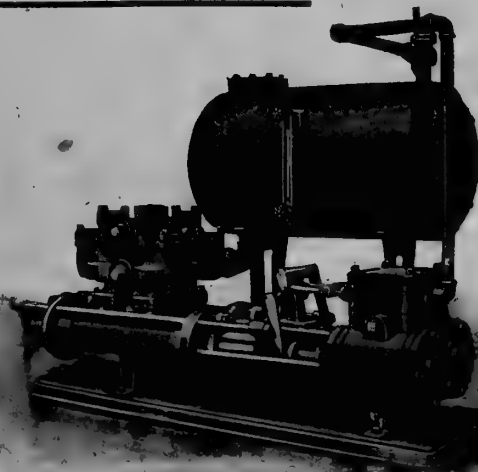
F. REDDAWAY & COMPANY

Sole Makers of MONTREAL



The Belt that will last longer, stretch less, and transmit more power than any other belt.

Stocks carried by The A. R. Williams Machinery Co., Limited,
TORONTO WINNIPEG VANCOUVER



BLOT out your troubles and buy your pumps from us. We stand behind them.

The Smart-Turner Machine Co., Limited

Hamilton, Canada

THE STRONGEST CHAIN IN THE WORLD

"Weldless Steel Chain"



Photograph of 7/16-inch Weldless Steel Chain broken with a test load of 9 tons, 3 cwts. (20,496 lbs.), or fully double the Admiralty breaking load for iron chain of this size. Note the elongation and reduction of area at the fracture.

CAN YOU BEAT IT?

WRITE FOR PARTICULARS

B. J. COGHLIN CO., Limited

∴

∴

MONTREAL

Midland Planing Mill Products

THE LEADING STOCK LINES

3 Doors — 4 Sash = 15 Designs

Can you beat that proposition? The up-to-date dealer who carries a stock of Hardwood Veneered Front Doors, wants the widest possible range of designs, but is always hampered for room.

Here are three designs of Veneered Doors and four designs of Midland Interchangeable Sash.



Door No. 612



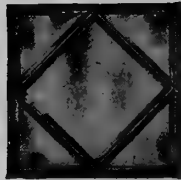
Sash A



Door No. 79



Sash C



Sash B



Sash D



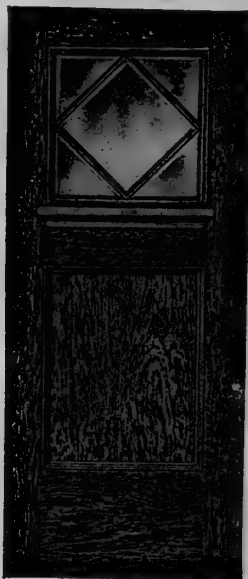
Door No. 81

These doors and sash are all you require to carry. Each door will make up into five different designs. The sash are easily fitted, just as easy as a pane of glass, and are **interchangeable**. The same piece will fit each of the different designs. You will require additional sets for each additional sized door you carry in stock.

See our new door catalogue "Midland Doors" for full information and prices.



And
this
is
what
they
look
like.



Door No. 613



Door No. 615



Door No. 82



Door No. 83

3 Doors + 4 Sash = 15 Designs

Can you beat that proposition?

Georgian Bay Shook Mills, Ltd.

Manufacturers from the Tree to the Finished Product
Midland - Ontario



VIEW OF OUR MILL AND BOOMS

George Gordon & Company
Limited
CACHE BAY - - ONTARIO

Manufacturers of

**Lumber, Lath and
Dimension Timber
Planing Mill
Dry Kiln**

Norway Spruce White Pine

James G. Cane & Co.

Prices right
411 McKinnon Building
TORONTO, ONT.

Yellow Pine Timber

And Lumber Rough or Dressed
Car Material and Long Timbers
a Specialty

PROMPT SHIPMENTS

E. C. BRADLEY LUMBER CO.

Lisman,
Ala.

and

Cincinnati,
Ohio

President and General Manager Assistant General Manager
D. C. CAMERON, Winnipeg Wm. ROBERTSON, Vancouver
Secretary-Treasurer, WILSON BELL, Winnipeg

The Rat Portage Lumber Co. Ltd.

Manufacturers of—

Fir, Cedar and Spruce
LUMBER

Cedar Shingles, Fir and Cedar Lath

Car Sills and Sheathing, Cedar Siding

Large and Long Timbers
for heavy construction work

Vancouver, B.C., and Harrison River, B.C.

T. H. Garrett Lumber Co.

Manufacturers of **YELLOW PINE LUMBER**

Mills :—

Selma, La.
Jena, La.
Melton, La.
Waukegan, Tex.
Buena Vista, Ark.

Long Leaf Timbers,
Short Leaf Finish
and
Railroad Material

Send your inquiries and orders to :—

General Sales Office

Suite, 1220 Chemical Building, ST. LOUIS, Mo.



**Spruce
White Pine
Banksian Pine
Birch**

Get our stock list and prices.

QUEBEC & ST. MAURICE INDUSTRIAL COMPANY,

Portland, Maine



**Dry Stock at Tomiko
Must be Shipped at Once
Write for Prices**

100 M' 1 x 4 & 5—10/16 Mill Run White Pine
 100 M' 1 x 6—10/16 " " " "
 50 M' 1 x 7, 9, 10—10/16 " " "
 88 M' 1 x 10 No. 1 Culls
 130 M' 1 x 12 No. 1 Culls
 100 M. 1 x 4 & up "

The Long Lumber Co.
 Hamilton, Ont.



Make It Plain
 that you are selling
HOCKEN'S
HEMLOCK DRESSED AND SIZED

The result will be satisfied customers and increase in business.

Prompt Shipments on Short Notice.

Hocken Lumber Company, Limited
 Otter Lake Station, Ontario



DRY WHITE PINE

MILL RUN (Boxout)

5/4 x 7 up 12/16	5/4 x 4/7	12/16
6/4 x 7 up 12/16	6/4 x 4/7	12/16
8/4 x 7 up 12/16	5/4 x 4 up	6/11
12/4 x 7 up 12/16	6/4 x 4 up	6/11

Send us your enquiries.

Watson & Todd, Ltd., Ottawa, Ont.

Wholesale Lumber

Car and Cargo Shipments

JOHN M. DIVER

DETROIT, MICH.

"Everything in Lumber"

High Grade Thoroughly Dry White Oak
4,000 ft. 10/4, No. 1 Com. and better. 22,000 ft. 12/4, No. 1 Com. and better
4000 ft. 16/4, No. 1 Com. and better.

Nice Soft Dry Poplar—Good widths and lengths
70,000 ft. 4/4, No. 2 Common 24,000 ft. 4/4, Selects and Saps
36,000 ft. 4/4, No. 1 Common 48,000 ft. 4/4, F. and S.

I offer the above at attractive prices.

Special Bills Cut to Order. Write for prices

Timber for R. R. Construction and
Commercial Purposes, a Specialty.

OFFICE:—413 Hammond Bldg.
Phone Cadillac 2275

The Georgian Bay Lumber Co.

Limited

Waubashene, Ontario

Manufacturers of High Grade

Lumber and Laths

Fraser Bryson Lumber Co., Ltd.

Wholesale Lumber Dealers

Selling agents for Fraser & Co., Manufacturers

Mills at Deschenes, Que., near Ottawa

White Pine Red Pine Spruce Lumber and Lath

Office, Castle Building
53 Queen St. Ottawa, Can.

JOHN GILLIES
President

DAVID GILLIES
Vice-President.

J. S. GILLIES
Sec.-Treas.

Established
1873

GILLIES BROS.

Limited

Mills and Head Office
BRAESIDE, ONT.

Manufacturers of

WHITE PINE

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4/4 No. 1 Com. & Bet. Wide Poplar.
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3 cars	6/4, No. 1	Com. & Betr.	Hard Maple (winter sawn)
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2 "	4/4, No. 2	"	"
2 "	6/4, No. 2	"	"
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Best Stock for Factory and Pattern Lumber

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The Heavier it is the Better we like it

**We Dress from 1 to 4 Sides up to
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Our grade is positively right, and prices will please

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Shipment by C.P.R.R., G.N.R.R. or B.C.E.R.R.

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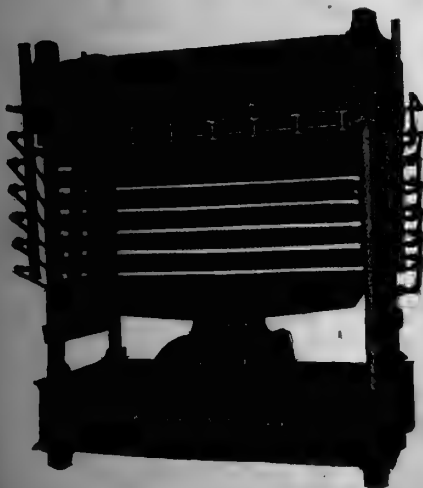
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Built in all sizes or to suit
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WRITE FOR PRICES
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We have the following Sawmill Machinery for sale:

- | | |
|---|--|
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | 1 Automatic Machine for circular saws. |
| 1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder. | 1 Hand Machine for cut-off saws. |
| 1 Double cylinder steam nigger, right hand. | 1 Lap Grinder. |
| 1 Log Loader for right hand mill. | 1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws. |
| 1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works. | |
| 1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs. | |
| 1 left-hand steam nigger. | |
| 1 Log-loader. | |
| 1 Endless chain jack ladder with two kickers complete for right and left hand mills. | |
| 2 Roger Gang Edgers for 8-in. cants and lumber. | |
| 1 Waterous double edger, 6 saws. | |
| 2 2-saw trimmers. | |
| 1 20-ft. Slash table. | |
| 1 16-ft. Revolving Slash Table. | |
| 1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works. | |
| 1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit. | |
| 1 Lath Mill with bolter. | |
| 2 Lath Trimming Saws. | |

POWER PLANT

- | |
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| 2 Double Duplex, high pressure Water Pumps. |
| 5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam. |
| 2 125 h.p. Water Wheels. |
| 1 Upright Engine for sawdust conveyor. |
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| 1 Mitts & Merrell Hog. |
| 1 Wood Machine for 22-in. wood. |
| 1 Wood Machine for 16-in. wood. |
| 1 Edger for ripping dry lumber, installed. |
| 1 Edger for ripping dry lumber, not installed. |
| 1 30 h.p. Generator, 250 volt. |
| 1 30 light arc generator. |

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

Also, contents of machine shop, containing Planer, Drill, Lathe and Machinery, with tools necessary for repair work.

All of the above open for inspection at Parry Sound.

FILING ROOM

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| 1 Automatic Filing Machine for 12-in. D.C. band saws. |
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United States Manufacturers and Wholesalers seeking Canadian Business

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QUARTERED OAK PLAIN OAK
POPLAR ASH

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We can ship you promptly any of the above
Stock, Carefully Inspected
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Manufacturers of Hardwoods—Any Thickness From

1/30" SLICE CUT VENEER

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to

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Specialty:

QUARTERED WHITE OAK

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Our Winter's Cut of Hardwoods Now Ready For Shipment

LOOK THESE OVER!

- 38 M. 1 x 6 and wider, 1st and 2nd End Dried White Basswood.
- 22 M. 1 x 6 to 8 in., 10 and 12 ft. 1st and 2nd Basswood.
- 40 M. 1 x 7 and 8 in. 1st and 2nd Basswood.
- 40 M. 1 x 7 in. and wider No. 1 Common Basswood.
- 24 M. 1 x 8 in. and wider No. 1 Common Basswood.
- 35 M. 1 x 6 in. and wider, No. 1 Common Beech.
- 40 M. 5/4 No. 1 Common and Better Beech.
- 60 M. 5/8 No. 2 Common and Better Beech.
- 48 M. 1 x 6 in. and wider No. 1 Common Birch.
- 24 M. 1 x 6 in. and wider No. 2 Common Birch.
- 38 M. 6/4 1st and 2nd Soft Gray Elm.
- 25 M. 12/4 1st and 2nd Soft Gray Elm.
- 18 M. 16/4 1st and 2nd Soft Gray Elm.
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- 22 M. 6/4 6 in. and wider, 1st and 2nd End Dried White Maple.
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A complete assortment of all grades and thicknesses.

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8/4 No. 1 common, 4 cars.

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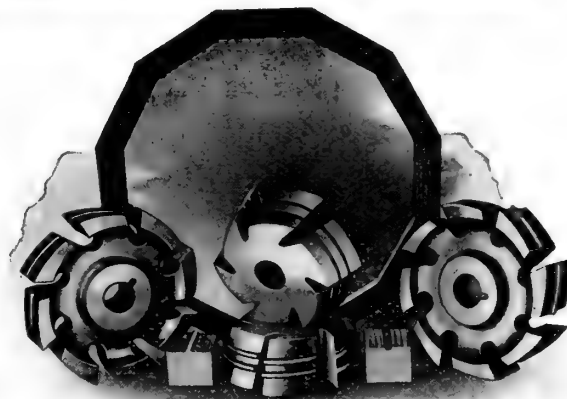
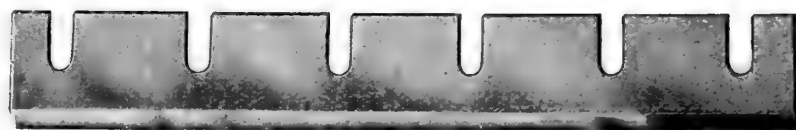
Photo taken by employee of Laurentide Co. Ltd., Grand Mere, P. Q. Their Supt., Forestry Division, states canoe damaged in Rapids, canvas held, braced up canoe and continued journey down St. Maurice River 70 miles. Used canoe balance of season and all following year.

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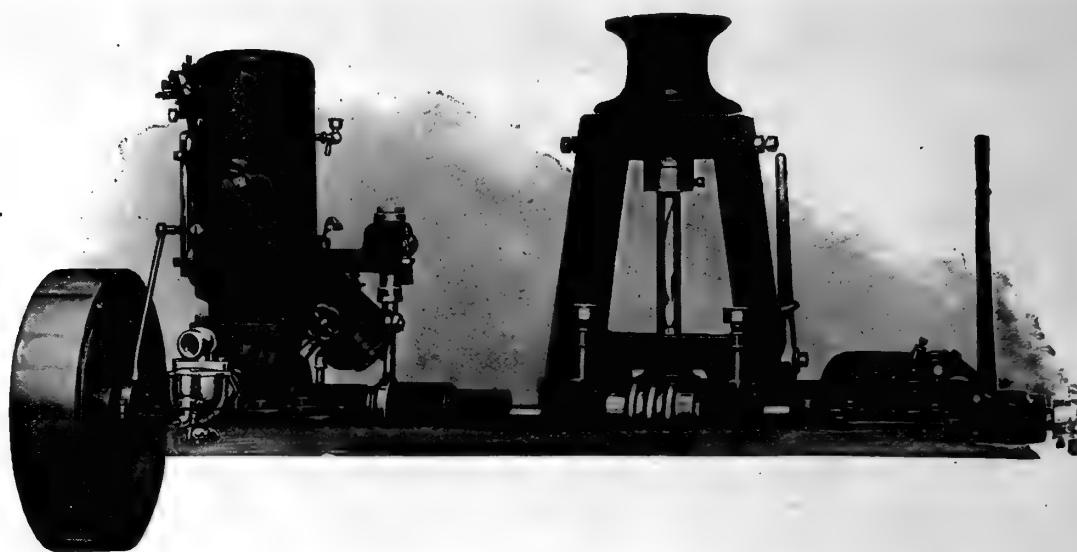
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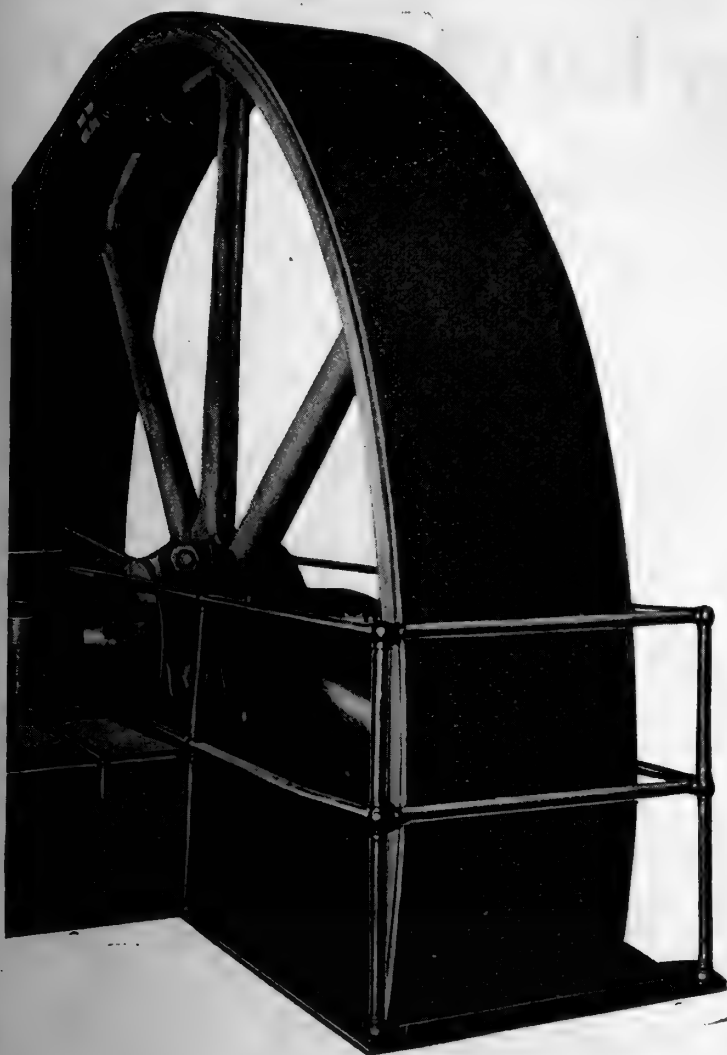
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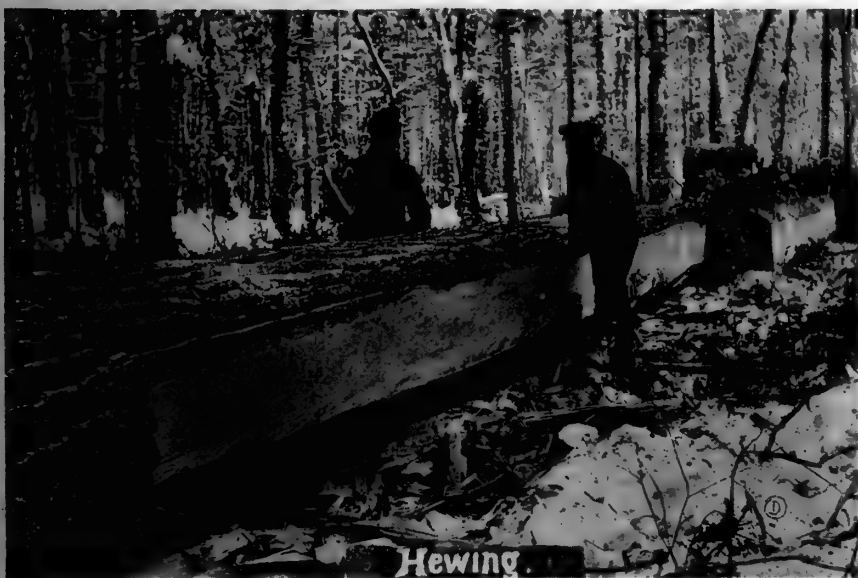
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5/8 No. 1 Common	21,000
4/4 No. 1 Common	230,000
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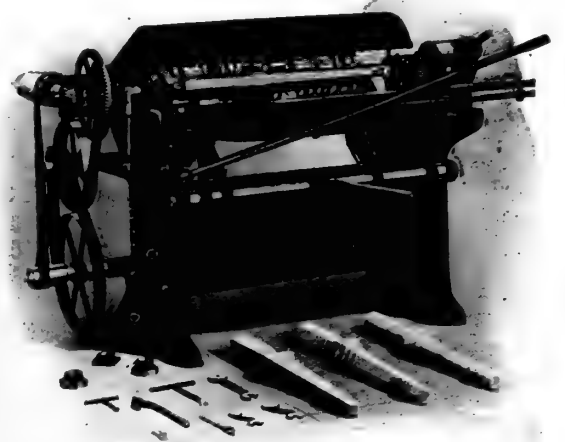
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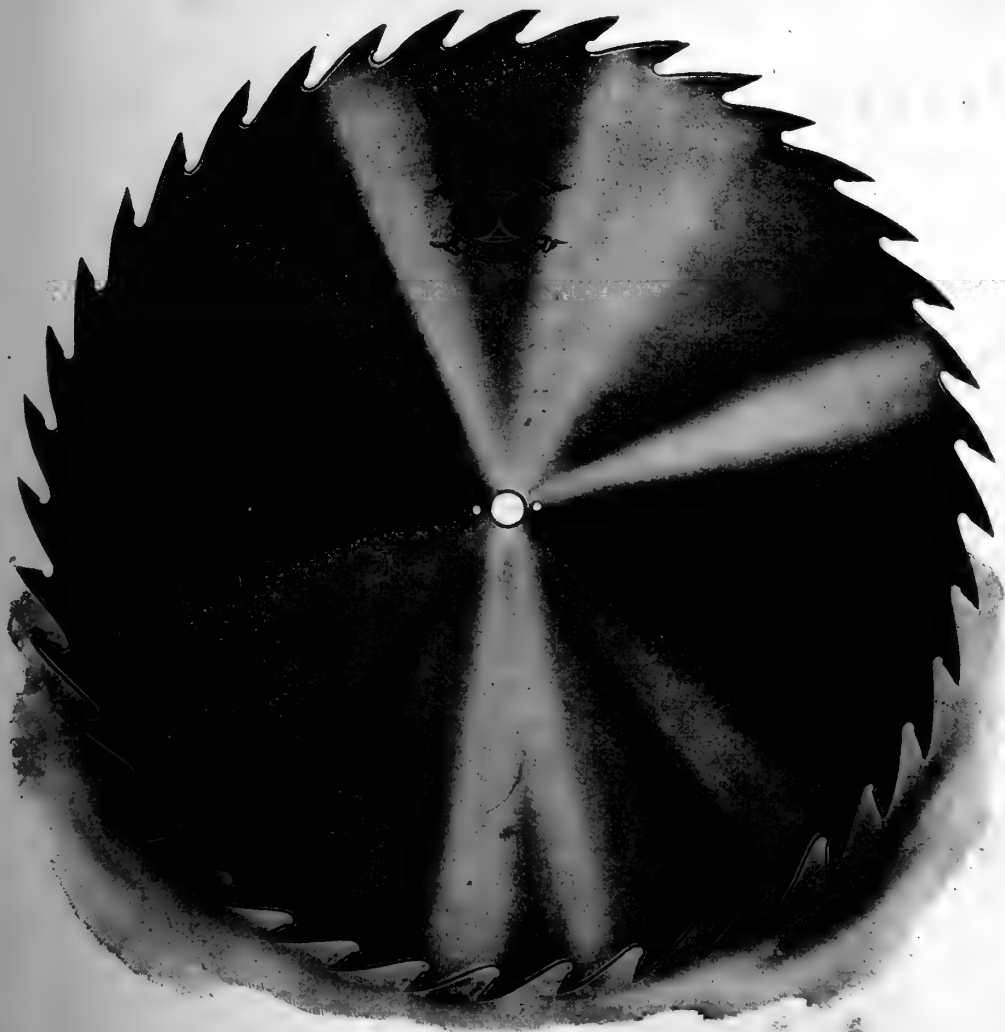
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Special care is taken to secure for publication the latest and most trustworthy market quotations throughout the world, so as to afford to the trade at home and abroad information on which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Vol. 34

Toronto, June 15, 1914

No. 1

The Love Feast of Competitors

Only a few years ago it was the fashion for the aggressive manufacturer, who found his competitor was getting the best of him in the guerrilla warfare of rampant personal competition, to send a spy into the enemy's camp to purloin all the trade secrets on which he could lay his hands.

Today, however, they are not doing this in the best industrial circles. The lively little game of trade spying has passed out of vogue, along with dominoes, pinochle and pussy-wants-a-corner. Instead of sulking in his tent, dispatching trade spies and plotting against the industrial life of the other men in his line, after the manner of a chieftain engaged in barbaric warfare, the up-to-date manufacturer is attending the love feast of competitors and putting his fighting energies into a campaign for the good of the line.

These are the opening sentences in an article written by F. Crissey and published recently in the Saturday Evening Post. The writer tells the story of the development and growing importance of the trade association movement so well that we reproduce a portion of his article below.

In a word, Mr. Crissey says, the present-day manufacturer who is a live wire puts in more time attending the meetings of his association than he or his predecessors ever spent in scheming to steal trade secrets from competitors. Of course there are some survivals of the old school of mutual suspicion who still linger in the land of the Philistines and believe that every man's hand is against them; who continue to talk of the survival of the fittest; and look on all competitors as natural and unalterable enemies.

But these remainders of the old order are not representative of the present hour; they are out of pace with present-day thought and methods and their faces are set toward the past instead of being turned to the future and its cleaner, saner and more constructive methods.

Any man who is strong and broad enough to be a bellwether

in his particular business world will unhesitatingly declare that the modern association is the biggest and most significant sign to be found on the face of the whole industrial sky; that the love feast of competitors is the most important function on the business calendar of the down-to-date manufacturer; and that the association movement is an economic uplift that has already accomplished miracles of service to the consumer, the middleman, the manufacturer and seller of raw materials—and this in spite of the fact that the movement is practically in its infancy and has not yet had a chance more than to scratch the surface of the field of its potential usefulness.

The simplest type of trade association—Sitting at the modern love feast of competitors are to be found scores of men seasoned in the hard school of the old time head-hunting campaigns, who will unhesitatingly confess that it is immensely more self-respecting to sit in an association council and plan with competitors for measures that will cut costs, save waste and spy out new markets for the whole line, than it was to battle single-handed and wage a bitter and blinding trade feud against all men who had the effrontery to engage in the line of production to which they themselves happened to be devoted. These veterans declare that the ethical change ushered in with the association is perceptibly altering the moral map of the business world, and is the most widespread and wholesome influence felt in trade today.

There are more kinds of business associations today than of automobiles, but the type that claims the center of the stage is that composed of men or firms making the same general line of product or selling the same general line of goods. Associations of this sort are not only most numerous but undoubtedly contain the greatest possibilities for good and the fewest possibilities for abuse. At least this type of competitors' love feast is the most vital, because it is the most elemental and basic; it hugs tightest to the problems of quality and cost in production, of standardization and regard for convenience of the consumer and of economy in distribution. So let this kind of association come in for first consideration.

The National Hardwood Lumber Association is representative of the simplest form of this kind of trade crystallization. Not many years ago a husky and ambitious young man in Mississippi, who had worked in the hardwood cuttings ever since he could handle a cant-hook, wanted to get married. He decided that the shortest cut to a home of his own was by the sawmill route. He had a little capital of his own, and also the confidence of a local banker and timber owner; so he took the bit in his teeth, bought a mill outfit, collected a picked gang of workmen and started to saw his way to a happy home and a bank account. This young man knew the hardwood game from stump to freight car—but his knowledge stopped at the shipping-point. Beyond that lay an undiscovered country.

This, however, did not worry him. The big markets of the north were crying for hardwood lumber, and he soon found his desk full of letters and circulars from enterprising jobbers and middlemen who were eager to handle his output on a commission basis. They carefully explained their special facilities for disposing of his cut. "Nothing easier than this!" he thought. "All I have to do is to saw the lumber, sort it carefully and send it on the market."

He did sort it carefully, and his grading was done with the eye of good judgment and with the determination to make his market understand that every stick from his mill was right. The returns from his first carload made him smile with satisfaction. Then he consigned several more carloads to the same man. He received a wire saying that the consignment graded out in very unsatisfactory shape and that the grader's report would follow by mail. It did, and he took the train to Chicago, never doubting that he could personally establish the outrageous error of such grading; but he found that there was no appeal from the official grade placed on his lumber.

He returned home, having suffered an outright and heavy loss on the shipment. Then he tried other markets—sometimes with the conclusion that the grading was perhaps honestly done according to the standards prevailing in the particular market in question, but more frequently with the conviction that the small shipper was consistently trimmed and that the grading was the saw that did the trim-

ming. Each market not only had its own standards, but its graders were apparently under the influence of the men dominating that market. He showed his grit, however, and stuck by the game until he was almost bankrupt.

Then he contrived to sell his outfit to a man who had not been up against a grader's discriminating pencil. This defeated young man was a type of a large class. The small mill man who consigned a carload of lumber to the nearest market could never be sure that he would not have to send money after it to help out with freight and demurrage charges. And when he sold outright at destination his fate was still in the hands of the grader. On a down market his stuff was almost certain to grade poor. Large mill owners and big output buyers were by no means exempt from the scourge of unstandardized grading and the abuses that thrived under it.

All was chaos and disorganization. The small mill owner saw that he stood no chance against the big buyer in the distant market when that buyer chose to exert a sinister influence on the grading of a shipment. If the toes of the small mill owner had been the only ones stepped on the unstandardized practice of grading would probably have continued indefinitely; but when the men who jobbed the outputs of large mills realized that unstandardized grading was the big peril of the trade the National Hardwood Lumber Association was brought into being. Apparently the sole purpose behind this step was to eliminate this weapon that was always likely to be turned against the seller on a declining market, and put the grading of lumber on a uniform, standardized and impartial basis.

It was easy to effect an organization, but far more difficult to establish and enforce a system covering the whole country, and recognized and accepted by all buyers. Moral pressure and tight teamwork appeared to be the only practical means by which to force the adoption of such system.

To-day uniform grades—those determined by the National Hardwood Lumber Association—prevail in every market in the country. The smallest mill owner may have his carload of lumber graded by an impartial and disinterested inspector in the employ of the National Association and have no string tied to him. Whether he sells or con-

signs his shipment, he is sure that he need not be whipsawed by the old trick of crooked grading; for all he has to do to secure inspection at the hands of an association man is to ask for it.

After describing a number of similar cases in connection with other industries, Mr. Crissey writes as follows:—The cases to which I have referred are typical of thousands of others; almost every industry yields sharp, conclusive evidence that the trade feud is one of the most destructive elements in commercial and industrial life.

Cost accounting is to-day a science that demands a specialist of peculiar training and experience; and this highly specialized service is expensive. The smaller manufacturer naturally feels that it is beyond his reach, and this hesitation throws an advantage into the hands of the large manufacturer who can afford such service.

When an association of manufacturers making the same line of product employs such a specialist, however, not only is the cost to each individual member greatly minimized, but the system that is worked out has the advantage, when put into operation, of uniformity. The smallest member of that association measures his costs with the same yardstick the largest manufacturer is using.

Mr. Crissey's treatment of this subject, while referring to conditions that have developed in the United States, may be applied with equal force to Canada, and especially to the lumber business in Canada. Continued efforts which the Canada Lumberman made, over a period of nearly two years, to bring out enough sentiment to establish grading rules of the principal Canadian lumbers, were of no avail, because the Canadian Lumbermen's Association, at their annual convention did not show sufficient interest. In the face even of this indifference, we are as certain as it is possible to be in this uncertain world, that we were on the right track. The same evil to a regrettable extent, as that referred to above, exists in Canadian connection with grading many of its important classes of lumber. The association movement in the Canadian lumber industry is still young, but the day will probably come when associations will realize that they have been neglecting one of their most important aids to success, by overlooking the grading question.

The Retailer and the Salesman

Lack of salesmanship has been pointed to many a time as the chief obstacle in the way of conducting a profitable business and as an important factor in raising the cost of manufactured products—among them lumber—to the consumer. A recent editorial article in this journal referred to this matter at considerable length and discussed the injurious effect upon the trade caused by frequent calls being made upon customers by travellers whose chief object is to take orders instead of to give value to the customer. There is no question whatever that retail lumbermen and other large consumers of lumber stocks, have to spend a great deal of their time in conversation with travellers to whom they cannot or do not wish to give orders. They would welcome any reasonable reform in business methods which would enable them to dispense with this unprofitable consumption of time, but they are unable apparently to do so.

The article in question dealt largely with the salesmanship side of the situation and had little to say about the buyer's influence. A subscriber, who represents a large lumber manufacturing firm, after reading the article, expressed the opinion that something had been omitted and that reference should have been made more extensively to the retailer and the other large consumers, in regard to their attitude to the salesmen. When one looks into the question closely, there is no doubt that this feature of the case deserves attention also. In fact the whole matter resolves itself into a question of studying the different factors in connection with buying and selling lumber, both in a wholesale and a retail way, so as to get at the most efficient manner of bringing about trade, at prices which induce further trade and with stocks that encourage continued custom.

The personal element comes into play from the very first and the business policy of the retailer or the large consumer has a great deal

to do with the manner in which he is approached by the travelling salesman. It is possible, we believe, to adopt towards the salesman a line of conduct which will show him clearly just what kind of treatment he may expect when he calls again and will relieve him of all that uncertainty which makes it necessary to solicit trade time and again without results, in the hope that some day he will be fortunate enough to drop in at a time when there is a good chance of getting an order.

The manner in which a retailer greets a salesman has more to do with the former's success as a business man than he might be inclined to admit. The salesman is generally quick to size up his prospect and to decide as to the best means of securing an order. He will probably come first of all to an opinion as to whether the retailer wants good stock, even though he has to pay a stiff price, or whether he is looking for bargains, irrespective of whether the stock will give satisfaction to his own customers. No retailer will blindly purchase stock which he knows is not saleable, but many a retailer will make a mistake in buying stock which he thinks will be saleable and which is offered at an attractive price; finding out later that he cannot make a profit on it. This is where his treatment of the salesman is important. If he secures the confidence and sympathy of the salesman, the retailer may depend upon him to post him intimately as to the stock which is being purchased. He can get this confidence from the salesman without any difficulty if he shows that it is appreciated. The way in which to secure it is simple, depending entirely upon treating the salesman frankly and letting him know, in just so many words, what his requirements are, or that he is not in need of fresh stock at the time being, but may require a certain class of stock a little later on.

Selling lumber to the retailer ought to resolve itself into these

simple elements and ought to eliminate all those wasteful discussions which have to their object the drawing out of information that some retailers seek to retain. The retailer who acts in a secretive manner with a traveller is in most cases doing himself an injury. In the first place he is compelling the traveller to go away without the information he requires, and is making it necessary for him to make further calls later on. These are the calls which result so often in a retailer having a line of travellers waiting upon him and taking up much of his time, when he is very busy. There are offenders on both sides of the trade—retailers as well as salesmen. The former have mistaken ideas sometimes of their own importance, or as to the proper way of doing business. The latter follow too often the erroneous principle of seeking to make a sale, not only in the face of opposition on the part of the retailer, but also by methods which involve either sacrificing all profits, or delivery of stock which is off grade. These two classes of mistakes are responsible for many of the criticisms which one hears in periods of dull trade and it is difficult to say whether one of them is more serious than the other.

Having had something to say already about the salesman and his sins, it is fair that we should present the case from the other point of view as well, and appeal to the retailer to act towards the traveller in a more considerate and businesslike manner. This does not apply to retailers as a body. They are not all offenders. There are many who are recognized as past-masters in the art of getting value for their money and of keeping the respect of the travellers who call upon them, but there are many also who might mend their ways to their own advantage and to the great relief of the travelling salesmen. It is a most unpleasant matter for a salesman who has a certain amount of time available for a call upon one of his customers, to find that he is kept waiting uselessly by a man who thinks that he must, first of

all, impress the traveller with an idea of his importance. Such tactics never do any good. They incense the traveller and fill him with an impression the direct opposite of that which the retailer probably desired.

After all, a transaction involving the sale of a stock of lumber, is a business matter. It is not, as some might imagine, a struggle of wits. It should not involve a lengthy discussion. It can be reduced to its simplest terms by a process of question and answer in a surprisingly short time. The traveller is above all things a student of human nature, but there is too much of a tendency now-a-days to magnify the importance of the traveller's insight into character. Travellers too often pride themselves upon their ability to size up a customer, and customers too often pride themselves on their ability to stave off the traveller or drive a close bargain with him, by giving the impression that they are not anxious to buy. These methods come dangerously close to the margin of sharp practice. They are all well enough in a small way. They must naturally form a part of a large proportion of transactions, but their importance should not be magnified to such an extent as to make them the chief factors in the deal. What the trade lacks to-day more than anything else, and what it must secure if it is to be lifted out of the unsatisfactory condition into which it has grown, is a better understanding of essentials in connection with a transaction and a better appreciation of the relative importance of the incidentals. The essentials are, frankness in giving and receiving information as to requirements and as to stocks in question, together with the treatment of one another as necessary factors in the carrying on of business. The incidentals are the studying of character, fighting off competition, and in fact all those efforts of so-called business strategy, which are alright in their place, but which, when they are allowed to bulk too large, become a menace to the trade.

Dry Rot in Timbers a Serious Menace

In another section of the present issue an article appears which deals in an interesting manner with the problem presented by the development of dry rot in mill timbers of shortleaf and loblolly pine. The question has been dealt with in many of its aspects in this journal on previous occasions, but the article in this issue is of much importance and should be read carefully by all who are interested in the use of yellow pine. It goes to show clearly, as we have often pointed out, that longleaf yellow pine is an excellent material for use as timber in mill building construction, but that the shortleaf and loblolly varieties, which are so often mixed in with the longleaf and are so difficult to distinguish from it, are unsuited for this purpose, and are in fact a source of grave danger. The question is entirely one of eliminating dangerous timber which is subject to dry rot, and seeing that it is put only to uses in which its susceptibility to this disease is of little or no importance.

If the statements made by the author of this article are correct—and they are borne out by results which have taken place in Canada of late years—it should be considered a criminal matter to mix shortleaf or loblolly among timbers which are supposed to be longleaf and are to be used in the construction of buildings. It is only about a matter of a month ago since a large firm of contractors in Montreal was subjected to a judgment amounting to \$71,000 in a case where they were charged with substituting the shortleaf timber for the longleaf. In this particular case, after about a year from the time when the building was erected, it was found that dry rot was weakening the timbers and it became necessary to replace many of them with steel. The defendants claimed that they found it impossible to secure sufficient of the longleaf timbers to fulfil their contract at a reasonable cost. The responsibility connected with this matter, and the indisputable fact that good timbers can be secured at reasonable cost are clearly brought out in the article in this issue, and these facts make it seem reasonable that the government, or others who may be in a position to regulate the use of timbers in mill buildings, should take some steps to place this responsibility exactly where it belongs—namely, upon the party who first intentionally substitutes the dangerous tim-

bers for the good ones. In order that such a regulation or law could be put into effect, it would of course be necessary to have the two classes of timbers very definitely distinguished, and the suggestions which have been made by the writer of the article referred to indicate a manner in which this may be done. They also indicate the manner in which the shortleaf and loblolly timbers may be made practically safe for use in mill buildings, by subjecting them to a preservative treatment.

Yellow pine is playing a most important part in the timber trade of Canada today and the complaints about the substitution of dangerous shortleaf and loblolly have become so general and so widespread that those who are engaged in the timber trade are commencing to study the question closely. They will find a great deal to interest them in the article referred to, which will help them to a better appreciation of the difficulties connected with the matter. By insisting upon the use of longleaf or similarly durable timbers, wherever these are called for and by posting themselves as thoroughly as possible in regard to the distinction between the two classes, they will help in preventing the importation of the dangerous timbers into Canada. This importation has reached great proportions during the last few years and will grow still greater unless those who are concerned take a personal interest and do what they can to see that architects, contractors and others, who are interested likewise, are impressed with the risks which they run by laxity in regard to the quality of the timber they may use.

On July 1st, the steamship "Robert Dollar," laden with 5,000,000 feet of Douglas fir, from the mills of the Genoa Bay Lumber Company, Genoa Bay, B.C., will pass through the Panama Canal en route to an Atlantic Coast port from which its cargo will be hauled by rail to Toronto. This will be the initial installment of 25,000,000 feet of Douglas fir to be used in extensive harbor improvements under way at Toronto. This shipment of Pacific Coast lumber marks an epoch in the trade that is viewed with varying emotions by the lumber manufacturers, east and west.

The Reader's Viewpoint on Trade Topics

Ottawa Valley Firms Having Trouble with Drives—Interesting Reports on Market Conditions

Ottawa Valley Conditions Unfavorable

Editor Canada Lumberman:

Hull, P.Q., June 5th.

We cannot speak of trade conditions exactly, so far as others are concerned in the Ottawa Valley, but we understand that the conditions generally throughout the Valley are about as bad as they can possibly be. We would not like you to quote us as speaking for others, but we understand, according to report, that some of the Ottawa Valley firms have met with serious conditions, fires having destroyed a large quantity of their timber and some of their dams for passing logs through the rapids and falls. This has allowed the water to escape and has prevented successful driving.

On our own river, the Gatineau, fully one-half of the logs we are driving, we have no expectation of receiving this year. The Ritchie mill at Aylmer has been destroyed by fire. Some of our neighbors will be in an even more serious position than ourselves unless very heavy and unusual rains occur within the next few days.

These conditions, which seem to prevail generally, must affect the market to a considerable extent. Trade at present is in such a condition and buyers are of such a state of mind, that it may be some time before they begin to realize what are the facts. So many adverse factors and peculiar conditions prevail in these days that it is very difficult to prognosticate as to the future of the market. We cannot help but look for an improvement in trade. We think the worst must have passed.—Ward C. Hughson (Gilmour & Hughson).

Expect Reduced Cut in Ottawa District

Editor Canada Lumberman:

Ottawa, June 3rd.

In connection with the driving situation, the time has arrived to find out what effect it will have on the production of lumber and the market situation this year, and we are satisfied that you will find some interesting conditions of affairs if you look closely into it at this time. Firms which have very short drives on large streams will not be affected. In many districts however where lumbermen have to drive out their logs from creeks or small rivers into the large waters, we understand on reliable information, that there are not a few concerns who will not get their logs out. If you canvass the Ottawa situation closely, and if they will tell you accurately how the situation stands with them, in our opinion you will find that the great bulk of their logs manufactured last winter are not going to get out. One of our largest manufacturers here informed us three weeks ago, that unless heavy rains came at that time, 600,000 of their logs were going to be held up. Conditions have not materially changed since that time. We understand another firm in Ottawa are tremendously concerned with the condition of the Gatineau River. By a close canvass it is possible that you will find the driving situation such as to affect materially the amount of lumber that will be sawn this season and thereby certainly affect the price of stock.

Firms which are now depending upon the rains to bring out their logs, may conclude that they are not coming out, because the time has gone by for rain to improve the driving situation materially.—Manufacturer.

Drives Hung Up on Small Streams

Editor Canada Lumberman:

Ottawa, June 5th.

We understand that there are quite a number of drives held up on the small streams, owing to lack of rain and shortage of water. As far as our own logs are concerned, they are all laid on Kippewa Lake, and, of course, not having any small streams to drive we do not experience any trouble from the lowness of the water.—Shepard & Morse Lumber Company.

Ottawa Drives Will be Smaller

Editor Canada Lumberman:—

June 8th, 1914.

Driving conditions in the Ottawa Valley have been poor this year. The long cold spring allowed the snow water to run away, and since then we have had no rains until very lately, and what we have had have not been sufficient to give any flood of water. None of our creek drives on the lower Ottawa are yet out, in fact some of them are hung up for the season. Drives in the Temiskaming district are progressing better as far as the creeks go, but logs coming into Lake Temiskaming this season are not expected to reach the mills until the following year, so that this will not have any effect on the supply of logs this year.

The most serious condition, however, is that the main Ottawa

itself has been low this season, and not high enough to bring down the logs stranded along its shores, and the water is now falling fast with the result that a comparatively small portion of the 1913 logs have been moved any distance. Unless continued heavy rains are received shortly the outlook is for a short supply of logs.—Ottawa Valley Manufacturer.

Think the Ottawa Drives Mostly Safe

Editor Canada Lumberman:

June 5th.

We have experienced considerable difficulty in getting out our logs on all streams tributary to the Ottawa, and in fact are not absolutely sure yet whether we will get all our logs or not. However, we are satisfied that we will get at least ninety per cent of them. The season has been particularly dry, and one which has called for extreme caution and continuous vigilance on the part of foremen drivers and we consider ourselves fortunate to be in the position in which we are to-day. We do not think there will be any drives of any consequence stuck in this valley, and cannot see how it will influence prices to any extent.—Manufacturer.

Poor Driving Conditions on the St. Maurice

Editor Canada Lumberman:—

Montreal, June 8th.

At the present time there is little of a cheering nature in the lumber trade in this province. The supply of logs may be considerably less than normal this year, as the prospects for stream and river driving are none too promising. In the St. Maurice Valley especially, there will probably be a shortage of logs. We hear that the St. Maurice people have been obliged to leave a good many thousand logs behind on that account. We ourselves have had to leave behind in the neighborhood of 50,000 logs.

Shipments of lumber to the United States from our district have been very small and some of our customers whom we have met recently do not anticipate a very large trade during the coming season. Pulpwood conditions seem to be worse with our company. Prohibition, by our local government, of the export of wood cut on Crown Lands, has had no effect at all upon this trade, and it looks as though the paper industry has more wood than it needs at the present moment. I myself believe that the government made a mistake in imposing such a restriction, as the United States is about the only market where pulpwood can be shipped with any advantage.

There is no great activity in wood products generally. Reports of building construction show a decrease, compared with a similar period last year and weakness is generally prevalent throughout industrial and commercial centres.—Quebec Manufacturer.

Moderate Trade at Exeter, Ont.

Editor Canada Lumberman:

Exeter, Ont., June 3.

In talking with a number of lumber salesmen we have come to the conclusion that their trade is not over brisk, yet we have all we can handle in mill work, employing the same staff as we had last year. Our yard business is slack in the lumber and shingle line. Early in the spring we were looking forward to a busy season and we purchased our stock accordingly, and therefore have been buying very little in the last two months, as we are trying to work off what we have on hand.

As far as we are concerned, we attribute the falling off in yard business to the heavy demand on lumber and shingles during March, 1913. Owing to the wind storm at that time a large number of buildings, which would have been good for a year at least, had to be repaired, and we have not looked forward to as heavy a demand. As the present season was late, carpenters could not get any new work in hand and this made matters worse. We are not looking ahead for any large orders for either lumber or shingles, but if we could get the right class of men we could handle at least double the amount of our mill work, as we have turned down a number of large contracts because we could not handle them.—The Ross-Taylor Company, Ltd.

Retail Trade Slow at Kendal

Editor Canada Lumberman:

Kendal, Ont., June 5th.

We have never found the retail trade so slow as it is at present. There is practically no trade in this district. The wholesale trade is just as slow, only we have sold at a cut price to a firm with whom we have been doing business. We believe that the revival of trade will depend largely upon the crop. Money is very close. The wind storm a year ago has put an extra large stock of lumber on the market this

year. Cement, as a substitute, has largely replaced lumber. We do not now sell 16,000 feet where we used to sell 20,000 feet for flooring for outbuildings. Even municipalities are replacing bridge flooring with cement, constructing their bridges entirely of cement. We can see no remedy for this except a revival of the building trade, which may take place if money becomes more plentiful. The great stringency in the west has much to do with the trade situation. The largest implement firm in Toronto informed me that their collections in the west last year did not exceed 30 per cent. on their sales and that at the present time 60 per cent. of their trade is foreign.—A. Jackson.

Logs Not All Out of the Drives

Editor Canada Lumberman:— Canonto, June 2.

From what we can observe in connection with the stocks of lumber moving in this district we are not able to report favorably upon business conditions at present. Trade is not even normal and we find collections slow. Driving conditions have been bad this spring, owing to low water. Up to the present we have been able to get in only about two-thirds of our logs. Other operations in our district are in the same situation, some of them worse. With heavy rains in June, we may be able to finish our drives, otherwise some of them will have to remain over for another year:—Lawrence Bros. Limited.

A Bright Spot in the Trade Situation

Editor Canada Lumberman:— Kingsville, Ont., June 4th.

Our planing mill business this spring in connection with the house building demand is 20 per cent better than in any previous year during the past fifteen years. The barn building in our district is rather slack, owing to the very low price paid for tobacco. This effects the retail trade and the sawmill trade to a certain extent, but our wholesale trade in hardwoods is keeping up very well, with the exception of red and white oak, the demand for which is very slack, as a great amount of red and white oak is shipped in from the south. All other hardwoods are finding ready sale and we are well pleased with present conditions of trade and the future prospects. It may be the case that the retail trade is slow throughout Ontario. This would be because retailers are using a great amount of southern pine as a substitute for our white pine, hemlock and spruce, which have been running high in price.—David Conklin.

Looser Money Needed by the Trade

Editor Canada Lumberman:— L'Amable, Ont., June 2nd.

The amount and quality of lumber cut in this district during the past winter is, I believe, up to the average. The majority of mills are pretty well cut out. Basswood appears to be the best seller and in greatest demand, the price being apparently as good as in former years.

Birch and maple have fallen off to some extent in price and the demand is slow. Hemlock, ash, spruce and balsam are selling more readily than birch and maple and are bringing corresponding better prices.

While the lumber market is less active than usual, the cause seems to be the general financial depression rather than the lowering of prices. The building trade seems inactive every where and this undoubtedly has its effect upon the lumber market. I believe that with the loosening of money, lumber will sell freely and at good prices.—A. W. Gordon.

The Forest Products Exhibition—A Criticism

Editor Canada Lumberman:— Ottawa, June 3rd.

The Wood Products Exhibition recently held at Chicago and New York undoubtedly did good work in educating the general public to a better appreciation of the importance of the lumber industry in America. The general result was marred by one feature which was everywhere evident. Reference is made to the keen rivalry between the associations representing the manufacturers of the different kinds of wood exhibited. Instead of concentrating their efforts on demonstrating the value of wood as opposed to its substitutes, steel, concrete, brick and stone, their whole idea seemed to be to boost their own particular kinds of lumber and to knock that of their rivals.

It would be of more value to the lumber trade to convince the public that a slow-burning construction in a building gives greater safety in case of fire than steel and concrete, than to confuse the popular mind with a long drawn-out controversy concerning the relative strength values of long-leaf pine and Douglas fir. In the booth where the virtues of northern white cedar were lauded to the skies was a lonely photograph of a reinforced concrete telephone pole that had snapped off short with the strain of ice coating on the wires. This photo and the valuable object lesson it gave were in an obscure part of the booth instead of being the feature of the exhibit and the demonstrators in the booth confined their efforts to depreciating the dur-

ability and taper of poles of Idaho red cedar. California redwood was boosted on account of the fact that it lasted almost indefinitely when used for tanks and vats in tanneries when any sound wood would last under similar circumstances. The fact that wood was much superior to metal for this purpose was not mentioned. This fact of the relative durability of different woods was featured in a large number of the exhibits when the fact of the matter is that wood is not a durable material except under certain conditions and in most cases does not last as long as concrete. The important qualities of wood; its softness in relation to its strength, the ease with which it can be shaped and its lightness, were not discussed at all. If it is the intention to hold these exhibitions annually or even periodically the importance of co-operation against the common enemy of the lumber trade, substitution, should be impressed on the exhibitors. If the exhibition is made the centre of strife between manufacturers of different classes of lumber the average man on the street will go away with the impression that very little is really known about the relative properties of the woods of different trees.—R. G. Lewis.

Canadian Lumber in United Kingdom

Opportunities Likely to Increase with Opening of Panama Canal—Obstacles which have Prevented Expansion

Export markets for Canadian lumber are the subject of further reports published by the Department of Trade & Commerce in its weekly report under date of May 26th. Mr. Harrison in a report upon the trade for British Columbia lumber at London, England, says:

"The views of a number of representative timber importers have been sought with the object of ascertaining the possibilities of developing an increased market in this country for British Columbia lumber. Those consulted included not only strictly United Kingdom houses, but also firms directly connected with Canada.

"The abrupt decline from the phenomenally high freights which ruled until the autumn of last year affected the timber trade perhaps more than any other, and the reaction from the buoyant conditions which prevailed has been more than usually severe. The break occurred at a time when the trade was carrying large stocks of timber of all kinds laid down at high prices, and has been succeeded by a period of almost uninterrupted inactivity and dullness. Freights remain at a low level, and at the moment there are no definite indications of a revival.

Severe Competition

"British Columbia lumber—which, as far as Great Britain is concerned, practically means Douglas fir—has always had to encounter severe competition in this market, largely owing to the heavy transportation which it has to bear in comparison with other sources of supply of similar materials, and up to the present its consumption has been restricted because its use has been chiefly confined to certain specific purposes, although the scope is extending, and there is no reason, except that of price, why it should not be largely increased. So far its chief competitor has been pitch pine, coming mainly from the Southern United States.

"As the lumber trade is probably the oldest branch of Anglo-Canadian trade, it has been thoroughly exploited, and the timber importers and dealers of the United Kingdom, many of whom are directly represented in the principal shipping centres of the Dominion, are not only thoroughly posted regarding the fluctuations of the Canadian and other markets, but many of them possess an extensive personal knowledge of Canada's forestry resources; while a number of the principal Canadian shippers either maintain agents on this side, or regular correspondents, with whom they are in constant communication.

"Although the Pacific is of later growth than the Atlantic industry, it would appear that the principal importers here are well posted regarding the conditions prevailing in British Columbia, and the consensus of opinion is that no increase is possible at the present time.

"It is reported that there are several cargoes now in transit from British Columbia for which no buyers are in sight, and which, when eventually sold, are likely to realize prices which it is feared must be unremunerative to shippers, while any attempt to increase shipments can only result in heavy losses, until the prevailing depression passes away.

"Some critics consider that the industry is less well organized in British Columbia than in certain other sources of supply, and that until the present heavy cost of labor can be reduced, the industry must be heavily handicapped."

Mr. E. D. Arnaud, in a report upon the trade at Bristol, England, says:—

"As the result of a full inquiry into the subject it has been found that the chief obstacles to an extended use of British Columbia timber are the cost and length of time required to bring it here. Consequently it cannot compete at present with timber from Russia and Swedish sources, but it is fully expected that with the opening of the

Panama canal and a great reduction of the freight charges, together with the acceleration in the time occupied in the voyage, it will become profitable to use larger quantities of British Columbia timber in the future. At present it is doubtful whether any Bristol channel timber firm would care to undertake to import a whole cargo on the terms now offering.

"A matter that has, on several occasions, been brought to the attention of this office as operating to the detriment of the Canadian deal trade is the apparently careless way in which the deals are made, especially in the product of New Brunswick mills, and it is very essential that absolute accuracy in measurements be maintained, otherwise loss will occur in the subsequent cutting up on this side. Canadian deals are often found with waney edges, and this also entails loss, from which, it is stated, Baltic deals are entirely free, and consequently in greater favor in the market here. It should not be a difficult matter to overcome these defects that are complained of as lowering the value of the Canadian product.

"In amplification of these remarks, the following extracts from correspondence with several leading firms in the timber trade may be quoted:—

A Bristol Importer

"About three or four years ago the lumbermen in British Columbia and Oregon were full up with business, as the local demand was practically in excess of the supply. Since then, however, the lumbermen have been increasing their output on their home trade. Owing to the general slump in Canada which followed, they are now looking for an export market, and are keen to sell to the English timber merchants, through, of course, the usual brokers. Columbian and Oregon pine, however, are not in common demand on this side, and only one or two London or Liverpool buyers would entertain a contract for a cargo. In the Bristol channel it would be quite impossible to sell a whole ship load. If prices were right, I have no doubt that we could sell little lots at 25/40 standards to some of the more enterprising merchants, but the great drawback hitherto has been the high price and the long time taken to deliver, sometimes nine to twelve months.

"When the Panama canal opens, we are hopeful that with the shorter time taken for delivery, we shall be able to open up a business with the west coast of America, but of course prices must be right, and this is, and has been, the great difficulty to contend with. I have figures before me quoting \$18 per M. feet for Oregon pine, select lumber, and the freight to Bristol would run to about 75s per standard. This means that with the commission added, this grade of lumber would cost quite £12 2s 6d per standard, and then the goods would have to be worked into floorings. At the present moment the prices for Norwegian floorings, planed two sides and edges, is £10 15s, £10 17s 6d per standard, so you can see that if the Oregon select pine is to contend with the Norwegian floorings, there must be a considerable drop in price. You will observe that the freight from the west coast to Bristol is quoted 75s, and the ordinary freight from Norway to Bristol is about 25s to 30s at the outside.

"If we put Oregon pine in competition with pitch pine there is just about the same difficulty. We are not so conversant with pitch pine, as comparatively little is brought into the Bristol market, but we judge that if Oregon pine is to compete with pitch pine prices, the price must be considerably lower than at present.

"To sum the whole matter up; the fact is, the west coast lumbermen have put up mills, and they cut lumber in excess of the present requirements, and they are looking to the Canadian government to help them out when all they have got to do is to meet the market price on this side, and sell their stocks to the best advantage that they can. This means, of course, a sharp loss, but they must put this loss against the good times that they have had in the last three or four years.

"When the Panama canal opens, I shall be glad if you will put us in communication with some of these mill men who now want to sell their stocks, and I believe we could build up a fair trade with them in the Bristol channel, also in Liverpool and London."

"There has been, for many years past, a market over here for British Columbian woods, but the business has always been restricted owing to the length of time it took to come over and the high price of freight. If the Panama canal gets over this difficulty there is of course reason to think that there should be an increase in the business done. It would be of interest to have prices from the exporters (if it is yet possible) based on the prices that may probably rule for freight when the canal is open."

From a Newport Firm

"There are, as you are aware, large quantities of this timber coming into the United Kingdom, but, owing to our having been able to obtain our requirements of American large logs in pitch pine, we have not so far embarked in the Columbia import trade to any extent. Owing to the long voyage, this wood comes in somewhat unwieldy cargoes, but we have no doubt that the opening of the Panama canal will effect great changes in carrying facilities and that the establish-

ment of liners on the route will lend to exporters being enabled to forward conveniently sized parcels that will find ready purchasers.

"There is already a fairly steady trade in this (Newport) port in Columbian pine timber, and a certain quantity is imported every year. At present, however, cargoes are brought by large sailing ships, and the greater length of time taken by these voyages makes the business somewhat hazardous, and so restricts the quantity imported.

"When the Panama canal is open for traffic we have every reason to anticipate that by the use of steamers and the shortened voyage, the trade will receive an impetus, the cost of the timber thereby being greatly reduced, and its use in this country consequently increased."

"We have imported British Columbia pine for some years past in full cargoes, but the demand for it is quite limited. It is doubtful if the sale will be materially increased by the opening of the Panama canal, though this of course depends somewhat on the amount of reduction in price which this route brings about.

A Cardiff Firm

"We have imported British Columbian pine for some years past in full cargoes, but the demand for it is quite limited. It is doubtful if the sale will be materially increased by the opening of the Panama canal, though this of course depends somewhat on the amount of reduction in price which this route brings about.

"It may have the effect of increasing the number of importers without increasing the total quantities sold in the long run."

Imports of Wood

"The following is a list of the imports of wood goods into the port of Bristol for the last three years:—

From—	1911. Loads.	1912. Loads.	1913 Loads.
Europe	97,651	96,564	140,921
Canada	47,609	42,424	31,284
United States—			
Eastern ports	3,351	4,041	4,277
Western ports	51	73	61
Australasia	1,835	28	1,132
	150,497	143,130	177,675

Importance of the Filing Room

It is a true saying that to do good work we must have good tools; it is false economy to try to do without them. I have filed for several companies whose filing rooms were very poorly equipped, and, of course, they expected equal results as those who have well-equipped filing rooms. On the other hand, I have worked for companies which had up-to-date filing rooms when the mill was first built, but they are not kept so. When any part of the machinery is broken they never want to replace it; their motto is, "Patch it." Patching is alright for the time being. I have seen some good jobs done along the line of patching, which lasted for an indefinite time, but it can't be depended upon. The sure plan is to order and replace the broken part at once.

The band saw grinder, for instance, is a very important machine and must be kept right to do good work. What I mean by right is to keep all the lost motion out, keep it well oiled, see that the cam shaft and boxes are not worn, keep the finger pin ground smooth and round, and the gate and slide in good order. If not kept so the emery wheel will wear very fast. See that the emery dust does not accumulate on the clamp that holds saw to machine. This dust will wear the saws in the second quarter, and, if the pulleys on band mill are worn very much, will cause center cracks where the emery dust wears; so be sure to clean dust off before clamping the saw.

To set the machine see that cam is set so that saw starts ahead before the emery wheel starts up. This will keep the teeth grinding ahead all the time, and not back; in other words, it will help to get rid of that "hollow back" which seems to bother a great many filers. Always keep the swage in perfect order, so that the grinder will work freely and easily.

In a good many cases when the swage is not working well the filer will think it is the grinder not doing its part. Perhaps the grinder will do very well after the first swaging, and on the second grinding the emery wheel will grind hard on the front, with the exception of point, and will only barely touch this. This being the case, the swage is not rolling ahead far enough, therefore the grinder bears the blame.

In setting swage never set so that it will pull the metal to a point, but roll it to a point. When it is pulling to a point you will find that it will bite or nip it off, and leave the point very thin and brittle. Then you will have to upset or grind very heavily, and in either case metal is wasted. If swage is set so it will roll the metal to a point, then it will neither have to be upset nor ground hard, for the swage is rolled to a point where the emery wheel will hit it lightly and will not wear the steel fast nor cause fractures.

Every time I think of the saw-stretcher it reminds me of a mill I



Taking out ties for the C.P.R.—A typical scene.

filed in western Florida several years ago. It was a single band, and at the time I took the position was cutting on an average of 25,000 ft. in ten hours. This mill could cut timbers up to 60-ft. in length (all long-leaf yellow pine), and should have been cutting from 50,000 to 60,000 ft. in ten hours, as it was all export bill stuff. The saws were running in the log so badly that they had to move the base of the carriage $1\frac{1}{4}$ -in. from the saw, to keep saw from running into it.

When I arrived the general manager took me over to his office and related everything, saying he could not imagine why the saws were running in so badly. He advised me to stop the mill and investigate and fix any trouble that I found. With the determination of finding the trouble, I went into the filing room and was successful in locating it. The first machine I saw was a roll or saw-stretcher. I examined this and found that the levelling block, or slab, was actually 4-in. higher than the rolls. Now just imagine this block being as much as 1-in. or even $\frac{1}{2}$ -in. higher. I could not possibly keep a smile from my face, for I felt that the trouble had been discovered at once.

Without any further investigation, I lowered the block $\frac{1}{8}$ -in. below the rolls. While doing this the old filer came into the filing room and asked me why I was lowering the slab. My reply was: "Did you ever level your saws?" He replied in the negative, saying he always left that to the rolls; that he never levelled the saws himself.

Placing the saw on top of the bench, I began levelling it. The eyes of the old filer were as large to me as a full moon in August, when he saw the straightedge rocked on the saw. It was dished so badly that it took a half day's work to level it. Then, giving it a roll and a promise, on the other side, I ground it and put it on the mill. Honestly, I believe it would have been impossible to bring a larger smile to the sawyer's face without moving his ears. I filed this mill for some time afterwards and never came in contact with any other trouble.

I once heard a conversation between two French-Canadians. One, who was relating his experiences on the Pacific coast, said: "I was sawing in a mill out on the Pacific coast that was so large that the head filer was getting \$65 per day and the company was furnishing him with fourteen helpers. The compound engine that drove the mill was so large that it took a barrel of oil to every lubricator drop." The



Taking out ties for the C.P.R.—The crew at rest,

other, in reply to this said: "I've had several years' experience on the Pacific coast, and at one time sawed in a mill that did not consist of quite as much machinery for the big engine to pull, but the mill was seven storeys high, had a carriage on each floor, and a band saw 550-ft. long. They had a telephone system in this mill, so the filer could talk with the sawyers on each floor at any time he wished." Those were surely "some" mills.—The Woodworker, Indianapolis.

How the C.P.R. Protects Its Tie Supply

The Canadian Pacific Railway Company are very extensive owners of forest lands, and through the Forestry Branch of their Department of Natural Resources are carrying out a large amount of work with a view to conserve their natural resources. Last year the Department cruised and valued timber to the extent of 645,330,000 feet B.M., in addition to preliminary surveys over 217,300 acres of forest. The company came into possession of large tracts of forest in connection with various railway charters taken over, and have maintained an active interest in their forests owing to the necessity for finding ties for the tracks. This branch is at present engaged on a systematic forest survey, classifying the land on the present tie reserves. Experienced estimators covered, during 1913, with this object, 265,338 acres in British Columbia. 769,000 ties were delivered to the General Tie Agent at Winnipeg during the year. The contract for 1914 is for 500,000, and of these, half had been cut and skidded to the Bull River by December, while 10,000,000 feet of lumber were in the water ready for the spring drive, and 7,000,000 feet on skids.

Not the least important work of the department is the patrolling of the forests to prevent fires. An elaborate system is in force, and last year 127 fires were investigated. The railway companies now recognize the value of this work, not only as a means of preserving their own property but also the forest lands through which their lines pass.

The C. P. R. Forestry Branch also plants trees for snow breaks along the western lines, 1,450,000 trees being used in 1913, and 250 miles of track protected with timber belts.



Taking out ties for the C.P.R.—A driving scene.



Taking out ties for the C.P.R.—A camp scene.

Commercial Importance of White Pine

Canada's Most Useful Wood—Mainstay of the Timber and Lumber Trade
For Many Years—Fifth of the Series on Canadian Trees

By R. G. Lewis



Eastern White Pine

ing with over 82 per cent.

Two Canadian Species of Pine

There are in reality only two species of pine in Canada that can properly be called "white" pine. These are eastern white pine (*Pinus strobus*) and western white pine (*Pinus monticola*). The former is found throughout the Maritime Provinces and in Quebec and Ontario south of the height of land. It is also found in South-eastern Manitoba but only in scattered, small quantities. Western white pine is confined to the Province of British Columbia and is most abundant on the coast and in the Kootenay region. Out of the total cut of white pine in Canada in 1912: 911,427,000 feet, only 1.7 per cent or 15,543,000 feet were made up of the western species which comprised the total cut of white pine in British Columbia.

The wood of the white pine proper is light, soft, not strong except in relation to its weight, fairly durable and compact. It has a fine, even, straight grain, is not splintery, can be easily and rapidly seasoned, and once properly seasoned, holds its shape better than almost any other coniferous wood in America. The heartwood is reddish in colour and the sap-wood almost white.

The following are Sargent's figures for the properties of white pine (*Pinus strobus*):—

- Dry weight of wood—24 pounds per cubic foot.
- Specific gravity—0.385.
- Ash—0.1 per cent of dry weight of wood.
- Fuel value—51 per cent that of white oak.
- Breaking strength (Modulus of rupture)—8,800 pounds per square inch or 55 per cent that of long-leaf pine.
- Factor of stiffness (Modulus of elasticity)—1,208,000 pounds per square inch or 57 per cent of that of long-leaf pine.

Mature trees make a diameter of from 4 to 6 feet and reach a height of 75 to 120 feet. Individual trees have been measured that made a diameter of 7 feet and a height of 240 feet. This is probably the largest tree east of the Rockies.

Western white pine (*Pinus monticola*) has very similar properties:—

- Dry weight of wood—24.3 pounds per cubic foot.
- Ash—0.23 per cent of dry weight of wood.
- Fuel value—52 per cent that of white oak.
- Breaking strength (Modulus of rupture)—8,700 pounds per square inch or 54 per cent that of long-leaf pine.
- Factor of stiffness (Modulus of elasticity)—1,356,000 pounds per square inch or 64 per cent of that of long-leaf pine.

Western white pine is a smaller tree at maturity than the eastern species. Its average diameter is between 2½ and 3½ feet and its height from 100 to 175 feet.

The Leading Wood for Building Material

The two most valuable properties of white pine are the ease with which it can be worked and the fact that it holds its shape after seasoning. More white pine is used in building construction than any other wood in Canada and the greater part of the lumber sawn is used

for this purpose. For sash, doors and blinds it has few successful competitors except where its increased value has permitted the substitution of some cheaper wood. White pine can be used to advantage in every part of a building from the shingles to the sills. Its stiffness and lightness are added advantages in its use for framing timbers in houses and in barns. Hemlock is taking the place of white pine for framing purposes to a large extent, being a cheaper and stronger wood, although less durable, harder to work, heavier and more liable to warp and twist.

For all classes of inside and outside trim, siding, sheeting, verandah work, ceiling, moulding, cornice, panels, base board and wainscoting, white pine is the king of woods for utility. It lacks a distinct figure and cannot compete with the more attractive hardwoods for beauty of appearance under varnish. But it is much easier to work and holds its place better than any hardwood. White pine does not make the best flooring when subjected to heavy wear but in many situations is superior to harder, coarser grained wood.

Extensive Consumption in Boxes

Next to its use for building material, white pine is used in greatest quantities by manufacturers of boxes and box shooks. The wood is light in weight and easy to nail although it does not hold the nails as well as some of the box-woods. Once very plentiful, the wood was used because of its cheapness and even now, when good white pine box boards are by no means cheap, the habit of use has become so strong that manufacturers find it difficult to substitute woods that are better suited for some classes of boxes. The medium and poorer grades form the greatest part of the lumber used, for this purpose. White pine boxes are used for packing all sorts of commodities, although as a rule, non-resinous woods such as spruce are preferred for packing food stuffs or commodities that might be injured by the resinous odour of the pine. For inside work on furniture white pine is valued for its lightness and permanency of shape. It is used for drawer parts, frame work and filling and sometimes for core stock under veneers. White pine is still used for the tops of tables where edged tools are used, as it does not dull the tools. For drawing boards and heavy draughting tables soft white pine or "cork" pine is the favorite material.

The Leading Wood for Patterns

One of the most exacting uses for soft white pine is in the making of patterns for castings. For this purpose the heart wood of mature trees gives the best results as it is usually softer and freer from knots, crooked grain and other defects. This soft pine has been given a number of names by its users and by many is considered to be a distinct tree from the ordinary white pine. "Cork" pine, "pumpkin" pine and even "pattern" pine are among these names. Other woods are purchased in small quantities for making patterns that are to be used repeatedly, or that are very complicated in form. Cherry and mahogany are used to a small extent but these are too expensive and difficult to work for the majority of patterns. White pine, grown in northern latitudes on good soil and allowed to reach maturity, produces a wood that is peculiarly suited for this purpose being solid without being hard, soft but not spongy, and free from defects. It cuts easily in any direction either with or across the grain, and above all, holds its shape without warping, checking, shrinking or swelling. No satisfactory substitute has ever been even suggested for this wood for this particular purpose.

The manufacturers of matches have created a steady and increasing demand for clear white pine match blocks. The scarcity of good match wood is becoming more and more apparent every year. Cheaper and less satisfactory woods are being used such as aspen, poplar and spruce but only because of the prohibitive cost of white pine. The blocks used for match making must be of clear, straight grained material. They are usually cut to a thickness equal to the length of the match stick and split or cut into sticks by automatic machinery. White pine is prized in this industry on account of its straight grain, and comparative strength, considering its weight and softness. In addition to these qualities white pine match sticks ignite easily and the glowing charcoal dies quickly after the match is extinguished.

Unexcelled for Ship Decking

White pine has always been a favorite wood with the shipbuilder and most of the Quebec pine exported to Great Britain was used in this industry. While the wood is not so durable nor so strong as some of the woods used for this purpose, it is very light in weight which is an important consideration in the building of vessels. Canadian white pine was for many years the only wood used in

quantity by British shipbuilders for decking. The decrease in its use for this purpose in late years is due only to the scarcity or rather the supposed scarcity of lumber of a suitable quality. White pine decks once well laid, kept their place, the cracks did not open in dry weather and the surface was always easily cleaned. A holystoned white pine deck always has that fresh clean appearance so desirable for high class passenger boats.

Douglas fir and spruce have largely taken the place of pine for spars and in any case Norway pine was used more often than white pine. One of the first instances of forest conservation in Canada was in the setting aside of the Norway pine for spars for the British Navy.

For all classes of what is called "straight stave" cooperage, including pails, tubs, firkins, kits and tanks white pine and cedar have always been the favorite woods in Canada. For larger water-tight containers such as cisterns, vats and silos, white pine has only lately been displaced by cedar and cypress which exceed it in durability in contact with moisture.

Miscellaneous Uses of White Pine

Bee-keepers and poultry-men consider that white pine is the best wood for bee hives, frames, brooders, coops, crates, and other accessories. Agricultural implement makers use the wood for straight box work where strength is not an essential quality. White pine water pipes were used in Canada and in the States when city and town water systems were first installed. Wooden water pipes have the advantage over metal ones in that they wear smooth inside with use instead of becoming roughened with accretions. This gives a better flow of water by reducing the friction. Old water pipes of white pine removed in building the foundation of the New St. Lawrence Market in Toronto showed very few signs of decay although they had been in the ground for at least fifty years. Wooden water pipes are still manufactured and used extensively as flumes for hydraulic work as well as water supply. They are now made mostly of cedar and Douglas fir.

White pine pump heads and logs were always in demand and are now only giving way to substitution by metal. Cypress and cedar have taken the place of white pine for greenhouse construction. Cedar and built-up veneers of other woods are now used more than this wood for trunk boxes, where lightness and strength are essentials. For piano action parts and sounding board ribs, white pine is still chosen on account of its permanency of shape. It would be difficult to mention an industry which does not use this wood directly or indirectly for some purpose and many industries demand it above all others.

Mistakes in Installing Machinery

One of the most common mistakes in installing machinery is in getting pulleys too small and then having to load down the tighteners to prevent belts from slipping, says B. J. W., in *The Woodworker*, Indianapolis. The loading down of tightener is, of course, not a mistake. Some means must be employed to prevent slipping and this is usually the first thing thought of and the cheapest way out of it for the time being.

The writer recently remodelled a mill in which the head rig (a pair of 60-in. circulars) was driven independently by a 200 h.p. engine, but was short of sufficient power. The driver on engine crankshaft was 6-ft., 20-in. face, leading onto a 36 x 20-in. pulley 31-ft. centers, with a 20-in. belt and a tightener weighing about 1,500 lbs. At the outer end of this shaft was a 36 x 20-in. pulley, driving an 18 x 20-in. on saw arbor, with a tightener riding with a load of 1,200 lbs. The top saw was driven from the bottom arbor, using 20-in. pulleys and a 12-in. belt, the tight side pulling over a 16-in. idler; the idler was on slack side, being hung in a pivoted frame and loaded down with 800 lbs. of scrap iron. The mill in this condition had been cutting about 20,000 ft. in ten hours, and had to hustle to do this much.

A new husk was provided and the pulleys were rearranged. The initial driver remained 6-ft., driving to a 54-in. pulley, then through a 72-in. to a 32-in. on saw arbor. Top saw pulleys were changed to 32-in., using same belts in all cases. The tight side of top saw belt was made to pull direct by placing both idlers on the slack side. Tighteners were adjusted so as to not exceed their commission, the engine was speeded up from 160 to 210 r.p.m., the resaw drive was overhauled accordingly and the bevel gear to edger drive was discarded and a belt over two idlers was substituted. Cutting was resumed with the same filer and sawyer and 60,000 ft. of good lumber was about the average ten-hour cut. Plenty of steam was now at hand, where before they had been "shy" a good part of the time.

Here we have three times as much work with about one-third more power, which all lies in the proper transmission. There are but few saw mills which are free from some of this drag. One of the most common places to find it is in the drive of band mills. Nearly all band mills have too small a pulley. Another place is the driving pulley of planers, which in most cases is seriously too small. A belt will do bet-

ter running at a fast speed with a light tension than it will at a slow speed with a high tension.

The subject is one that demands close attention and judgment, but does not often get it. There are many saw mills that look to me like an aggregation of machinery designed to consume power rather than to manufacture lumber. One close to where I live, which has lately been rebuilt and generally overhauled, has one of the worst cases of the malady that I have ever noticed. They can't get steam enough; the boilers foam and discharge their water through the engines; they keep spending money to prevent this in every way but the right way, and are borrowing money to meet the pay roll.

They have provided separators on the feed pipes, exhaust heads, condensers, boiler compound, etc., but there is absolutely no difference in the way the boilers throw off their water. The water has been analyzed a number of times and pronounced pure. One engineer was discharged for telling them what was the matter; another was hired at a larger salary and has been provided with all the above improvements (?) and I heard the manager remark that the man at the head of his power plant was the only man he had employed whom he thought competent. The mill has three rigs and a gang edger and cuts from 20,000 to 30,000 ft. in ten hours.

I once built a mill for a company, the manager of which was anxious to get the largest possible quantity of machinery for his money, and this is the way he went about it: Plans and drawings of the plant were made and approved; we were steering for a mill that would cut 75,000 ft. in ten hours. Schedules of the machinery and equipment were made out and makes and sizes given in all instances; material was provided and the work of constructing the mill begun. It was up to the wise and brilliant manager to purchase the machinery and equipment.

He started out by getting prices on everything as specified, then tried to see how much cheaper he could get it. He had all the second-hand men and junk dealers chasing him, and about once a day he would come and tell me how much he had saved on a certain article. I would ask him the make and condition, and he would answer that it was as good as new and same as list. Soon the stuff began to arrive. About the first things that came were the four boilers, which were set in place and inspected, and a certificate was given allowing a pressure not to exceed 60 lbs. Everything else in proportion came along and we set it up under protest, until I got tired of protesting, after which it was set up without protest and things seemed to go much smoother. Finally the mill was completed and started up with the 60 lbs. pressure of steam.

I remained there finishing up odd jobs for about two weeks, and thought I could notice an air of disappointment in the manager's manner and felt that he was blaming me for the great deficiency in the cut, for the mill would not do better than 30,000 ft. a day. When I came to settle up I asked him if he was satisfied with his mill. To my complete bewilderment he answered the question enthusiastically, saying he was more than pleased with it; that he had the best saw mill in the state and had gotten it \$10,000 cheaper than he had expected.

Quebec Cullers' Report

The following comparative statement of timber, measured and culled, is issued by the Supervisor of Cullers' office, Quebec, under date of June 5th:—

	1912	1913	1914
	Cu. Ft.	Cu. Ft.	Cu. Ft.
Waney white pine	124,880	5,720	52,520
White pine	80	40	.....
Red pine	1,320	.....	.....
Oak	1,320	560	32,240
Elm	43,080	29,480	96,960
Ash	120	840	480
Birch and maple	38,640	47,680	50,800

Rapid Advance of Swedish Pulp Industry

The wood pulp industry in Sweden is the subject of a report published by the Department of Trade and Commerce of Canada in its weekly report under date of May 26th. "As direct enquiries from Canadian pulp mills are frequently received in regard to the situation of the pulp market in Sweden," the report says, "the following translation is taken from the Norwegian official journal of recent date":—"The Swedish pulp industry is making rapid progress and plays an ever larger role in the trade balance of the country. The export from Sweden during 1913 was, of mechanical moist 580,300,000 lbs., as against 479,020,000 lbs. in 1912; of mechanical dry 129,820,000 lbs. during 1913, against 126,390,000 in 1912; of chemical dry, 1,371,900,000 lbs. during 1913, against 1,360,150,000 in 1912; of chemical moist 127,600,000 lbs. in 1913, against 114,400,000 in 1912. This indicates quite a rapid rise throughout the whole line."

Yellow Pine and the Dry Rot Problem

Important Report Prepared by an Expert on Behalf of Factory Mutual Insurance Companies—Causes and Precautions Explained

An editorial reference to a statement regarding yellow pine recently made by Mr. F. J. Hoxie, engineer and inspector for the Associated Factory Mutual Insurance Companies, Boston, Mass., was published in the Canada Lumberman of February 15th. Mr. Hoxie, after studying the effect of dry rot upon mill timbers, especially in textile and other factories where ideal conditions exist for the development of dry rot fungus on account of high temperature and extreme humidity, is reported to have said that hard pine of the old durable variety is now out of the market, and that sufficient to build a factory cannot be obtained in the sizes required, at a price competitive with other materials. This remark came in for widespread criticism in the lumber trade journals of the United States. They gave Mr. Hoxie credit for attempting to point out a scientific and businesslike method of preventing the use of unsuitable timbers in the frames of mill buildings, but they found fault with many of the facts upon which he based his statements, claiming that good long leaf timbers were still obtainable at reasonable prices, and placing the responsibility for the use of unsuitable short leaf and loblolly timbers, upon engineers and architects, who failed to obtain the right class of timbers, because they did not insist upon them. They also criticised Mr. Hoxie's conclusion that the resin percentage in these timbers was the index of their durability, claiming that the resin occurred in small and isolated ducts, the antiseptic action of which was due largely to its waterproofing quality, and therefore, when so definitely segregated, resin could not protect the rest of the wood structure in which only traces of it could be found.

Mr. Hoxie's views upon this subject have now appeared in the form of an address presented at the annual meeting of the National Association of Cotton Manufacturers, and his report makes it possible to arrive at a much more definite conclusion in regard to the very important subject which he had under discussion. So extensive has the use of Southern pine become in Canada for the construction of mill buildings, and in fact for many other classes of building in which it is used to support great strains, that the report of an expert engineer and inspector of Mr. Hoxie's standing is of unusual importance to all who have to do with the selection of timbers for purposes of construction.

Dry Rot a Recent Development in Timbers

Hard pine, Mr. Hoxie says, has been used for the floor beams for the past fifty years and has given satisfactory service in all respects until within the last five years, when dry rot has appeared with such frequency as to demand investigation. Twenty cases have been brought to the attention of the Factory Mutual Fire Insurance Companies within this period. The damage has varied from a few hundred to nearly a hundred thousand dollars. All common varieties of timber have been attacked, but yellow pine most frequently, as that is in most common use for mill frames.

The cause of this rapidly increasing destruction is unquestionably the use of poorer timber than in former years. The frame of a mill is now rarely seen, of which North Carolina, shortleaf or Cuban pine do not form a considerable proportion. The best qualities of heart wood of these varieties are probably as resistant to rot as longleaf pine, but they are less uniform and the poorer qualities are generally more difficult to detect.

In textile mills, the high artificial atmospheric humidity undoubtedly increases the tendency to rot. With 70 per cent. saturation of moisture and a temperature of 80 per cent. Fahrenheit in a weave room, a decrease in temperature of 12 degrees or more will cause precipitation of moisture. This condition is frequently found in cold weather at roofs, windows or bearing ends of beams in the brickwork.

The longleaf pine has proved more valuable for timber than the others owing to its greater strength and durability. The latter quality is probably chiefly the result of the high percentage and uniform distribution of the resin and the small percentage of sap wood, the sap wood of the longleaf pine averaging about two inches in radius of mature trees, while that of the other three varieties varies from 4 inches to 6 inches of the radius.

Good Timbers Available at Reasonable Prices

In a recent trip through the longleaf pine forests of Louisiana, Mississippi and Alabama, I found it evident that longleaf pine of suitable sizes for mill timbers can be had at reasonable prices. It remains to make specifications defining the qualities required, when a bill of timber for a cotton mill, or other important structure is sent out by the designing engineer or architects, to be sure of get-

ting timber that is strong and durable. Evidence of the inadequacy of the specifications now in common use is plain in many ways.

I found in all cases shortleaf pine growing in the same forests with longleaf and cut by the same mills, which tends to disprove the statement of a well-known authority that the place or origin of timber, as shown by the bill of lading, serves as a suitable safeguard. It is not enough that the most of a lot of timber shall resist fungus to secure a safe structure. All of it must be resistant. In no case investigated has all the timber of the mill rotted.

The need of more definite specifications for mill timbers and columns, I find, is appreciated by the lumber manufacturers who produce good timber. Many examples were given by the manufacturers where timber bought as "shortleaf" had been sold by middlemen as "longleaf," or "merchantable" sold as "prime," and the "square edge" sold as "merchantable."

The lower grade of hard pine timber called "square edge and sound" does not pretend to be longleaf pine. All varieties (longleaf, shortleaf, Cuban and loblolly) are manufactured indiscriminately into this grade. Its durability cannot be depended upon without antiseptic treatment. One of the most serious cases of rotting which has been investigated was undoubtedly due to the use of this grade of lumber in filling a specification calling for "the best quality longleaf Georgia pine."

Heart Wood Percentage the Grading Basis

The percentage of heart wood in hard pine timber is now used almost exclusively as a basis for grading, and the fineness of grain as an index of longleaf pine. Neither the one or the other is infallible. Shortleaf pine has well defined heart wood which is highly susceptible to fungus attack. It also has grain bands which are frequently finer than those of the best longleaf.

A suggestion made by Mr. Weiss, Director of the United States Forest Products Laboratory, which is excellent so far as it goes, is that all hard pine timber should be clearly branded with its grade and variety, the name and location of the saw mill responsible for the grading, thus making the manufacturer responsible for the selection of the material. This suggestion is in the right direction and should put a premium on selected material, rewarding the careful manufacturer for his painstaking. With this system in use, there will be the Calcasieu, the Wausau, the Newman, the Lutch Orange or the Kaul quality of timber rather than the present conventional "longleaf" or "shortleaf."

The grading will still be upon a vaguely defined standard. Its value will depend upon the care and good judgment used by the manufacturer in sorting the material. It will make it less easy to falsify grades and facilitate locating the responsibility for mixing poor material with good. Under present conditions the dealer who can mix the most loblolly and shortleaf with his longleaf timber, and get it accepted, has the advantage.

Clearly defined quantitative chemical and physical standards are needed as a basis for timber grades, in addition to the branding suggested, so that there will be uniformity in the grading of different manufacturers. At present, any lumber dealer or inspector can decide what is longleaf and what is shortleaf pine, as it has been made legitimate to sell other varieties as longleaf, if they are as good as longleaf, without defining its good qualities. Branding reduces the number of judges, from everybody, to the lumber manufacturers who are best qualified to know the botanical varieties which they cut. The reputation of a reliable manufacturer for producing good material should put a premium upon his product which should serve as an incentive. However, there may be unreliable manufacturers who have no reputation to lose and to whom the higher price of high grade timber would be an incentive to mix in the largest possible amount of poor material, trusting that the time necessary for it to make itself manifest would be sufficient to cover their deception. Specifications based upon the physics and chemistry of the timber can do more than anything else to raise it from the level of a gambling proposition to the higher position in structural engineering that its many superior qualities deserve.

Europe Gets Much of the Best Pine Timbers

It is a significant fact that much of the best longleaf pine timber produced in the South is being shipped to Europe. The European buyers consider quality first and are willing to pay a higher price for good timber. Too many of the Americans are chiefly guided by price. Several lumber manufacturers, producing excellent longleaf

pine timber, stated that they hardly considered it worth while to quote on true longleaf timber to the American trade, as mixed varieties sold at a lower price were practically certain to be accepted. Longleaf pine of merchantable inspection interstate rules of 1905 in sizes suitable for mill timber can be had, I am told, at about \$33 per M., delivered in New England. Prime would be about three dollars more. The best quality "German Prime" would cost from \$40 to \$50.

Undoubtedly an inspector who has had long experience with the several varieties of pine may make a very good guess as to their values. This guess is largely influenced by the apparent density and resinous qualities of the wood. General experience in the past, as well as the results of the present investigation involving a large number of mill timbers, indicate that resin and density can be taken as indices of strength and durability. The centers of shortleaf pine timbers which are more resinous than the outer portions resist the dry rot fungus much longer, as is shown in numerous examples where the centres have remained sound long after the outside has fallen to pieces with rot. Analyses of a number of specimens have shown that the percentage of resin at which dry rot stops in mill timbers is about 3 per cent. This does not mean that timber containing more than 3 per cent. of resin will not rot, but that it rots more slowly and that under average textile mill conditions the fungus will probably be killed before it has seriously weakened the beam. This suggests a possible basis of grading which can place timber on a footing similar to that of steel and concrete. Numerous measurements by the United States Forest Products Laboratory have shown that the density of yellow pine timber is an index of its strength; therefore these two factors should be important in establishing a reliable standard of grading.

Persistent Activity of Dry Rot

One of the most treacherous qualities of the dry rot fungus is that it can remain for a long time in a resting state and on being wet can develop into its vegetable form and grow rapidly through the surrounding timber. Infected sticks frequently spread the disease to other sound timber with which they are placed in contact. With susceptible timber, the most careful handling is not sufficient to guarantee immunity. The only safe procedure is to give it a reliable antiseptic treatment as soon as possible after it has been sawed.

Ventilation has been generally recommended for preventing dry rot. Dry wood which is kept dry is undoubtedly incapable of fungus infection, but ventilation does not necessarily cause drying. Timber ventilated with moist air may be made to rot faster.

Careful investigation has shown that a temperature in the neighborhood of 115 degrees Fahrenheit maintained for an hour is sufficient to kill the dry rot fungus. Its most rapid growth is in the neighborhood of 75 degrees Fahrenheit.

In conclusion Mr. Hoxie discussed the various methods of preventing the development of dry rot, by treatment of the timber before being used. Under varying conditions, coal tar compounds, creosoted compounds, chloride of zinc and corrosive sublimate have been found very effective for this purpose. Mr. Hoxie concluded his report with a summary of the whole substance, as follows:—

(a) Specifications for hard pine mill timber based on its physics and chemistry are needed, in place of the present botanical names which have little significance.

(b) Density and resin are suggested as indices of good qualities.

(c) Timber which is strong but lacking in natural resistance to fungi can be made serviceable by antiseptic treatment.

(d) Of the several antiseptic treatments which have a record from years of practical service on wood used for other purposes, kyanizing by use of corrosive sublimate appears to be best adapted to mill timber. Other newer processes with which experience is lacking give promise of usefulness.

Piling and Drying Lumber

By M. C. Berne

The problem of time is an important one in the drying of lumber. Here, as everywhere else, "time is money." A shortening of the time required to prepare lumber for the finished article is important because during this time it represents so much money standing idle, producing nothing, but gradually consuming itself in interest charges.

Time is also an important factor because the more rapidly lumber can be satisfactorily prepared, the less liable it is to receive damage. The annual loss resulting from damage to lumber on this continent alone is variously estimated to be from \$15,000,000 to \$50,000,000—a sum sufficiently large in any event to cause every man who is interested to stop and ask himself: "What proportion of this loss do I contribute?" The loss is not altogether the result of overtime in drying; it is also the result of defective piling, which either causes or allows the lumber to become crooked, as well as retards the drying process.

Some men imagine that any man who can carry a board can pile lumber; this is a mistake. Piling lumber requires brain power as well as physical power. The enormous waste mentioned indicates the necessity for more intelligent care in the handling of this great national asset. I say national asset because it is something that affects every one, more or less.

Lumber should be piled "high and dry," and in such a location that the air can circulate freely among the piles. If this is not done, the air becomes stagnant and foul, which is a favorable condition for the spread of those diseases which attack lumber and which result in decay and discoloration. If the ground is low it should be filled in. It is not sufficient to pile the lumber high above low, damp ground, because from the ground will come the cause of the trouble. There is nothing better for filling in low ground for a lumber yard than coal ashes and cinders, and very often they can be obtained much cheaper than other material.

Beyond doubt the best foundation for lumber is concrete. It is cheap, solid and durable. If well constructed and put down below the frost line it will never move. The concrete pillars should be raised above the ground sufficiently to insure a good circulation of air beneath. Air rises, and the openings between the boards will form so many flues through which the air may rise and carry off the moisture, if it be allowed to enter at the bottom. If the location is high, allow 1½-ft. at the front, giving a drop of from 8 to 10-in. In order to insure straight lumber, be sure the tops are in perfect alignment.

The usual way of piling lumber has been to pile it with one end of each board about 8 or 10-in. higher than the other. But men have been applying scientific knowledge to the piling of lumber, in an effort to save some of the enormous waste. It has now been found that in the usual way of piling lumber the cross-strips interfere with the natural circulation of air through the pile, and consequently retard the process of drying and seasoning. Not only this, but when these cross-strips are placed at intervals between the higher and lower ends of the boards, the rain that beats in washes the dust and dirt down to the cross-stick, where it remains. This takes considerable time to dry out and very often starts a rot.

When lumber is piled with one edge of the boards raised instead of the end, the air, which naturally rises, may go up the incline without being obstructed by the cross-strips, because they run the same way as the air. Another improvement has been noticed. Heretofore the tendency has been to place the boards with the edges close together, depending on the shrinking to open them up. But this is not sufficient. The very time that the lumber most needs the open space to facilitate circulation is the time it has not got it. A small space should be left between the edges of the boards when first piled.

The ideal condition for a lumber pile would be to have it covered with a roof high above the pile. This would protect the top boards from the sun and rain and yet allow free circulation of air. But this, at the present time, is not always practicable. The top boards, however, must be protected from the sun, and if we allow the air to escape or circulate through the top, it is difficult to keep out the rain. But rain coming in at the top of a lumber pile will do much less harm, if there is a free circulation of air to dry it out after the rain is over, than water driven in at the sides by a driving rain, if there is not that free circulation of air to dry it off again.

Good, clean water does not injure lumber. It is the standing, soaking and consequent mildewing in a stagnant atmosphere that discolors wood and starts decay. The covering, therefore, should be sufficient to protect from the sun, but the space between the edges of the boards should be left open, to allow the air to come through.

The cost of handling lumber is great. It is safe to say that the cost will range from 50c to \$5 per 1,000 ft. every time it is handled. This means that it does not pay to move it any oftener than is necessary. And the strange part of it is that the place where the cost is highest is usually the place where lumber is handled most frequently, because these places seem to lack system in everything. A factory which has plenty of yard room should have tracks and plenty of trucks or cars, so the lumber may, in the first instance as far as possible, be piled on these and be ready for the kiln as soon as the kiln is ready to receive it, without any further handling.

Much time and labor is wasted in storing lumber in the shed after it has been through the kiln. Tracks should run from the kiln into the shed, and the lumber run in there and left on the trucks until it is required in the factory. Lumber should not be used immediately after leaving the kiln. A short time should be allowed, in a good dry shed, for it to adjust itself to the new condition before being worked up into stock.

A great deal of damage is done to lumber by piling various lengths in one pile. When this is done the ends of the longer boards are left unprotected. The result is the unprotected ends warp, twist and check. Watch this closely, because a great deal of waste results from it.—The Wood-Worker, Indianapolis.

The Care of Saws

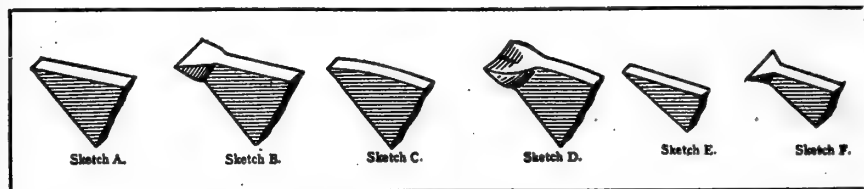
In the use of all swages employed in spreading the points of saw teeth, great care should be taken to see that the swaging dies are in the best condition possible, for, if they are not, they will not do the work required of them in anything like a satisfactory manner.

The teeth should also be kept in proper shape for swaging. In many instances not enough care is given to the shape of the teeth. It is a matter of great importance that the teeth be kept in proper shape to swage, as the swaging, fitting, and shape of teeth, have much to do with the successful use of a saw. If a saw has a large, round gullet, with plenty of hook in the teeth, nicely swaged and fitted, it will take far less power to drive it, make better and more lumber, and require a great deal less work to keep the plate in shape than when these conditions are not properly met.

The teeth should be slim enough to swage out easily, giving a good swage at front of tooth, but not slim enough to turn over or bend back in the cut.

If the tooth is too slim, as shown in cut "E," the swage will spread too much at the extreme points, and not extend far enough into the body of the tooth to give it the required strength. In this case the corners would be needle pointed, as in cut "F," and would be likely to break off or bend back in the cut, and the saw will not run half the usual time before it will need refitting. On the other hand, if the teeth are too stout, as in cut "C," the swage will spread too far into the body of the tooth, and not enough at the points. It will be seen that if a tooth is too stout and round on the back near the point, as in cut "C," the top die, instead of bearing a little heavier at the point, as it should, bears too heavy on the high or round part back from the point, and bears scarcely any at the extreme point. Thus, instead of the point being spread as it should, it is pulled apart, and the result is checks and splits at the point. See cut "D."

Where there is such a large amount of material in the tooth, it re-



quires double the amount of pressure to spread it. In fact, it does not spread clear through the tooth, but simply rolls the metal over at each side of the tooth, extending quite a distance down the back of the tooth, with scarcely any in front.

When it takes such a heavy pressure to spread the tooth, the dies acting on hardened steel have a tendency to crystallize and case-harden the steel. This will eventually cause checking and dropping of corners.

Swages are now made that can be conveniently adjusted to the shape and point of the tooth. After the first swaging, if care is used to not materially alter the shape of tooth, there will be no further trouble, as the swage will then fit the tooth, bearing equally on the part of the tooth being swaged. After swaging, the tooth should be faced off on the front.

We submit a number of cuts of different forms of teeth for convenience in illustrating our ideas on this subject.

Cut "A" represents section of a tooth in proper shape to swage. Cut "B" represents the same tooth after being swaged, and before being fitted. It will be seen that the tooth has been altered but very little in the process of swaging, requiring very little dressing to bring it to its original shape. Cut "C" also shows a tooth before being swaged, and cut "D" the same tooth after the operation. It can readily be seen the great amount to force it must have taken to spread this amount of hardened steel, and also the work required to bring the tooth to a good working shape. A tooth in this shape makes trouble in swaging, and is detrimental to the general working of the saw, as the teeth will cut much harder; and for this reason the plate is more apt to crack at the gullets from the severe strain on the edge.

Cut "E" represents a tooth before being swaged, and cut "F" the same tooth after swaging. In this case, as in the others, the shape of the swage is governed by the shape of the tooth before the operation. The tooth being too slim, the spreading was done at the extreme point, and the corners are therefore needle pointed and it will not stand in fast feed, or in fact in any kind of sawing.—The Simonds Guide for Millmen.

At the annual meeting of the Campbell-MacLaurin Lumber Company, Limited, Montreal, the following officers were re-elected: Messrs. Alex. MacLaurin, Montreal, president; De Witt C. Culver, Ogdensburg, vice-president; Arthur H. Campbell, Montreal, managing director; George L. Ryon, Ogdensburg, and Maurice Welsh, Toronto, directors. The accounts submitted showed that the fiscal year which closed on April 30 had been a very successful period.

Status of the Retail Business

By a Lumber Association Secretary.

That other material than lumber for building purposes has been widely exploited and extensively advertised is well known, and that many of these things are finding their way into use is equally an established fact. Also the trade is pretty generally aware that last year there was over 92,000,000 barrels of cement manufactured, much of which was used in building operations. Yet in the face of all this, it is not easy to prove that there is a decrease per capita of lumber consumption in the United States due to a decline in the retail trade.

Exact figures are not available to show positively the magnitude of the retail business of the country to-day and its comparison with a few years back, but it is a safe bet that the retail business as a whole, taking the country throughout, is larger to-day than it was ten or twenty years ago. There will likely be, of course, certain localities where the settling up of the community rapidly made a boom time and called for a much larger volume of lumber than is being consumed for building purposes in the same community to-day. But these individual communities are not the whole country, and taking the whole country over there is more lumber used to-day in modest home building than ever before, notwithstanding the coming of substitutes, and the uses of cement, brick and other structural material. There are several explanations and reasons for this. One is that the country is increasing in population, and another is that more people are building better homes, and still another is found in the subdivisions of lands into smaller farms which calls for more home building. If there is a big loss in lumber consumption, the source of that loss will be found around the car-shops where steel has also made great inroads. It is these things that are making the big inroads into lumber consumption, and incidentally one of the things that has been helping to make trouble for the lumber manufacturers is in that they have pushed milling operations and concerned themselves more with getting timber and turning it into lumber than they have with the conditions of the lumber market and the inroads made by substitutes in these lines.

It is hardly fair to make the retail trade the goat of the situation to-day and insist that the retailers are not progressive enough and not showing enough aggressive activity in the pushing of lumber exclusive of all other offerings. The retailer is doing his duty by the lumber world fairly well, and even though other material enters extensively into the stock of the retailer to-day, taking the retail trade as a whole, it could perhaps be established if figures were available that it is handling more lumber to-day than it was ten or twenty years ago. Of course, there is always a chance to boost the game and increase the volume of consumption by new lines of work and by more intensive cultivation of the field and live advertising. It is perhaps a good thing also to occasionally make the retailer think he is not doing his full duty in marketing lumber in that it may arouse him to more strenuous effort. But, and as the writer of the lame duck articles at Washington would say, there are quite a number of buts, the retail trade is doing very well, thank you, and the status of the retail business to-day is not a thing to go into fits over with generalizing, high sounding statements that the trade is asleep and is not doing anything like near the business it ought to do. Both the retail lumber business and the jobbing planing mill business is in pretty good shape taking the country over, and they are likely to continue in good shape and to keep doing a fair volume of lumber business. Substitutes here have not made the inroads some people claim they have and have generally resulted in supplementary business rather than in displacing lumber or reducing the quantity of lumber used materially.

A splendid demonstrative example of this is found in connection with cement, which is to-day a big item in the retail trade. Some would have us believe that those 92,000,000 barrels of cement replaced just that much lumber in structural work. Instead of this it is a well known fact to those who have followed the matter up closely that the use of cement has increased the consumption of lumber. There are a few cement houses, where it takes the place of lumber, but this is more than made up for by the lumber used in form work where cement is used for foundations and for big structures in which lumber has but a small place. Where the old house foundation used to consist of a few blocks set up on end or a few piers built with stone or brick, we have to-day the solid concrete and the concrete block foundations, and in the building of these more lumber is used than formerly entered into posts and sills for supporting houses. In other words, cement has added materially to the business of the retailer, yet it has not replaced lumber, but has often increased the demand for lumber to supply form material for the concrete work. This is the biggest item among the substitutes that come into the retail yard, and since it helps the retailer and doesn't hurt the lumber business, what, one may ask, is the use of all this talking of war on substitutes and the implication that it means disaster to the lumber business? So far as the retail trade is concerned, the lumber business is in good shape, and the indications are that it will stay that way.

Avoiding Claims Easier Than Settling Disputes

One of the annoying things in business is the matter of claims. The unjust ones, of course, bother us the most, but even those that are just produce more or less a feeling of annoyance, because it is an inference that we have made a mistake, and this is something we don't like to have other people know. We put up a "bluff" of cheerfully rectifying an error on our part, and paying a just claim against us but at the same time we feel it a reflection on our self confidence. We "fret and stew" over what we know is an unjust claim, according to our individual sensitiveness, and particularly those that we submit to for policy's sake, and if we kept tab on these, it would be surprising how many of them influenced us in this way. If we think a customer is honest in coming back on us with a claim for shortage; if we believe he thinks we have made an unintentional mistake, we are more apt to be charitable with him, and unless we can prove to him that the error is his, our considerations for his future good will and trade will impel us to give him the benefit of the doubt, if the loss is a minor one in amount.

As I've intimated above, it is astonishing how business men do put up with false claims for the sake of policy. The manager of the book section in one of our department stores told me of two instances of this kind that I thought were particularly aggravating. A woman came in and bought two dozen of small programme cards with little pencils attached for use at a dancing party she was giving for her daughter. In a day or two, she returned the pencils and asked that they be credited on her account. Another woman sent her little girl to purchase a book of which there were several volumes. She took the first volume home and read it, and sent it back and got the second one and returned that and so on until the seven volumes of the series had been taken, read and returned. This was done without paying for the books or their delivery, for each book was delivered to the house as it was ordered. The manager said she spoke to these two women of the propriety of their paying for what they had taken and used at their homes. They refused, however to do this, claiming that they understood at the time they could return them, which of course, was not true. But both being wealthy women and their trade during the year being considerable, it was thought best not to press the matter any further, and suffer the imposition, as the money loss was comparatively trifling.

Not Quite As Bad

Of course, we have nothing as bad as this, in the lumber business. Nevertheless, we experience some pretty unreasonable claims in the matter of returning unused stock that has been bought and sent out on a job. Dealers don't like to do it, but it has become the custom in selling a bill, to agree to take back all that is not used, and whether agreed or not, at the same prices at which it was sold. The buyer, in either case will claim it, whether it was previously agreed or understood, or not. The question of shortage, also, is quite a fruitful one for dispute even where the dealer takes pains to check it out himself. Where the yard man checks out a load he is not so absolutely sure of it as when he personally attends to it, and no more annoying thing can happen than to have the person taking it out, come in the next day, or a few days after, and want to know why you didn't send out the number of pieces that were on the bill. You look and see that the item has been checked and you are perfectly sure that your count at the time was correct. Now, in a claim of this kind, it is very unwise to get into a dispute over it. The only way is to disprove it, and in the absence of having a receipt for what went out on that particular load, a personal investigation is the only thing to do, if you want to make your word good. It is not always practicable to do this, but wherever it is possible, it will pay to do it for the moral effect, especially if it is a contractor that is making the claim. If you make one mistake like this with a contractor, he will always look for them in the future. If you are easy about the matter, the chances are of his liability to take an undue advantage of you in the future. But when he sees you determined on seeking the proof of an alleged mistake, he will be more careful in being sure of it, than he otherwise would. I learned this by many an unpleasant experience, and have spent more time in hunting out such claims, than the value of the alleged shortage several times over. No business man can afford such claims made against him for it doesn't take many of them to have a current remark being made of him that, "He will bear watching." At the same time, the dealer may be wholly innocent of deserving such talk. It is his own carelessness and disregard of the moral effect it produces, that puts a stain on his business ways of doing. You had better spend \$10 in hunting up a claim for shortage of fifty cents worth of stuff that you absolutely know was taken out, or delivered by your own team, rather than to have it get out that you will "bear watching." I was very sensitive about this, so much so that rarely any stuff went out of the yard that I didn't count before I made out a ticket for it. On busy days, I know this is hard to do, but it is on such days that most of the mistakes are made that

rise up afterward to make us a lot of trouble in settling the claims. A few minutes spent tallying what is going out, will save future worry and time spent in hunting up alleged shortages in count or measurement. Except in a very few cases I have always been able to find that the stuff went out of the yard, and in most cases, the error was in the count on the job. A number of cases I found were plain attempts to hold me up and beat me out of what was claimed.

In the earlier days, a good deal of material was stolen from a job after it had been delivered and the carpenter being careless about tallying it at the time of delivering it was not discovered until he wanted to use it. Consequently the dealer had to bear the blame, as it was the easiest to put it on him. A few of such cases, in those days, caused me to tell those who bought the stuff to be sure themselves of what they took before it went out of the yard, as I would not be responsible for it after it had left the alleys. In the first yard I had a good deal of my trade was from a distance as far as fifty and seventy-five miles. The hauling was done mostly by regular teamsters who hauled goods to the towns where there were no railroads. I required every one to personally count the pieces, and keep tally of the boards as I measured them out. Then I took a receipt for it all. Those were free and easy times, and I was told more than once, that I was too d—d particular. Be that as it may, I know, that with the understanding of my liability that I gave out and the tallying, and receipts which I held, I had no difficulty with my distant trade on the score of shortage. One instance I remember of a teamster who had it proved on him, of unloading a part of his load on his own homestead, but as it didn't come from my yard, I had no part in the settlement.

The Dealer's Responsibility Ends

In these days when lumber can be counted by the piece there is not the excuse for shortage claims that there was when every board had to be measured. The buyer then had to take the word of the dealer that he was getting the amount he was paying for, but now he can count the amount for himself. The duplicate bill that is given the buyer should show on it the number of boards as well as the amount of feet. If this is done, it can be checked off more easily by him as he takes the stuff out or when delivered as in the case with a job in town. But it requires constant care on the part of the dealer to see that his customers do their own counting before it leaves the yard whether the load be large or small. There are some customers who do this voluntarily. I like to see them do it, and consider it no reflection on my honesty, although I have seen men who acted as though they suspected me of possibly beating them if I could.

You know there are some who are so suspicious by nature, that they are hardly satisfied with their own count. We like to have men trust, and show their confidence in us. This is all very well, but too much trusting of this kind is apt to produce laxity and carelessness. We know we are more particular with the customer who exhibits a sharp lookout for his own interests. When we are sure of the fact that he is going to count after us when he gets home, we are doubly careful that it is all right before it goes out of the yard. But the way to do, as I have said, is to have him satisfied that such is the case before he leaves the yard. In other words, it is best to have your misunderstandings beforehand. Have this as a fixed rule also for your employees and hold them strictly to its observance, for, as you may have experienced, many a case of shortage has been owing to the laxity of a yard man in letting stuff go out of the yard without either he or the buyer recounting it.

A customer who is in a "boozy woozy" state when he comes into the yard is in such a dependent condition, that one has to run more or less chances on him. He may be able to make known his wants, either verbally, or by some half obscure writing on a soiled piece of paper. He is loaded up, but is too befuddled to count it, or know whether it is all right or not. Maybe he is in fairly good trim, but should he have a bottle in his pocket, there is no knowing whether he will get home without losing some of the stuff that went out. If he does, he won't know it until the next morning when he is in his right mind and goes to count it. Perhaps, however, he won't discover the loss until he goes to use it, then he will, like as not, swear it on to the lumberman.

Lost It Off the Load

I had a case of this kind once, in which a customer lost a bunch of shingles. The roads were rough, and he was too stupid to notice when it fell off the wagon. I was careful in loading him, as I always was in such cases. And therefore I was positive that he took out what he was charged with, but he came back at once with a claim for shortage that under the circumstances, I would not allow, and for some time there was that difference between us in a settlement. Luckily, however, I found out that a neighbor of his had seen the bunch along side the road and took care of it till he found the owner. From that time on, I took the care to fasten on the load, and one or

two instances I remember, I pinned the ticket on the inside of the fellow's coat so he wouldn't lose it.

Shortage in Measure

One of the most frequent causes for shortage claims is board measurement. A man has figured out for himself the number of feet required to cover a certain area of surface. He tells you what he wants and you give it to him. He comes back with the claim that you didn't give him enough. You look over your business for that day and you find you gave him a certain number of 8 or 10-inch 16-foot boards as the case might be, and it figures up to just the amount sold him. You know that both of you counted them at the time, but he lacks more or less to cover that space, which you perhaps don't know anything about. The fact is, those boards were well seasoned and he has laid them close together and the shrinkage is the cause of the claim. Now, in a case like this, where a man has done his own figuring, you should get him to tell you the space he wants to cover. Then figure it yourself and add a few feet extra, because you know, that boards don't always hold out in width and when a number are laid side by side they don't cover the space of your board measurements. I always have taken this precaution to ascertain the space to be covered and did my own figuring to obviate any shortage claim, and I date this precautionary idea from an experience I had in my second year of running a yard. At that time common boards were all widths and nothing less than 8 inches, and few of them. In fact, we would "kick" on a shipment that had over 10 per cent. of this width which customers thought was too narrow for strength, usually they were from 10 to 22 inches wide, with an average perhaps of 14 inches. When these wide boards were pretty dry, we had to be careful in measuring. We paid for a 16-inch board that the rule showed to be 15 $\frac{1}{4}$ inches, which in a board 10 feet long would mean one foot less than we had bought. In passing the loss on to our customers we sometimes had a dispute.

The case I speak of, was the sale of a lot of common boards to cover the shed roof of a horse and cow stable 30 feet long and 12 feet wide, which required 14-foot boards to cover it. I remember this size, because of the experience. The customer was a Frenchman, and a pretty sharp, shrewd fellow he was, too. He wanted the widest boards. He had figured the number of feet he wanted, and I gave it, for which he paid me on the spot. He was polite in his ways, and I was pleased over getting a new cash customer which were not overly plenty in those days. In a few days he came in with a stormy look on his face, and claimed in French and English that I had cheated him. It was difficult to explain to him the reason for the shortage. All he could see was that he hadn't enough. He being a new comer, I didn't want to lose him for a customer, so I gave him what he wanted, and promised to come out and measure it all over, which I did the next Sunday. I found of course, that I had measured it all right in the first place, and I stayed there until I had convinced him that I had and he was fair enough to pay me for the extra I had given him, as well as a good dinner for my pains in coming out there to make it right with him. It was a lesson I never forgot for its influence in causing me to avoid all such claims, by figuring out for myself the right amount that was needed.

Because of Incorrect Figuring

There is many a claim made for shortage on a bill that is the fault of the man who made it out, but it generally falls on the dealer and his assertion that he has given all that was on the bill doesn't always convince the mind of the buyer as he naturally thinks his carpenter knows how to make out a bill sufficient for the job. It is therefore of prime importance that the dealer should be able to have a general knowledge of what is required for the ordinary building. The bills should be figured as they come to him of course, and he should furnish the items as shown on it. But, if there is a shortage on any of them, he should be able to prove that it was not his fault. A dealer who can do this, has got the "cinch" on the carpenters who think they know how to make out a bill, but don't.

Another advantage which it gives the dealer is that he can tell when a bill is being "stuffed" on him. You know what this kind of "stuffing" means don't you? In case some of you don't, I'll tell you. In losing a bill some times, you wonder why. The reason may be that a carpenter wants your competitor to sell it, and wishing to seem friendly with you, gives you the chance to figure on it, but he gives you a larger bill than he does the other fellow who sells it of course because there is less in it than the one you figured on. This is a common trick that is played in a yard "scrap" and the dealer who is not able to detect the "stuffing" of a bill is at disadvantage if he plays a square game. Then again, if he knows what a bill should be, he can prevent the sending out a lot of surplus material for the carpenter to pick over and return what is not needed, and in such a case, what comes back is not the same grade as was sent out.

The large retail houses in the city have a claim department where everything of this character is sent for settlement. A man at the head of such a department must be especially gifted and fitted for

such an onerous job, for, while there are just claims to settle, the larger proportion of them are all the way from frivolous to downright dishonest. Yet, all claims of whatever nature are dealt with in a way that will afford the least friction with the customer, and at the same time, conserve the interests of the house. An ordinary retailer, however, has no one to whom he can pass on the complaints and claims to his trade, and therefore he has to act as his own head of this department of his business, and it requires the same exercise of tactful skill and patience as it does in a regular claim department of a larger business. The main thing is to settle a complaint so as to hold the customer, for a dissatisfied customer is an advertisement that is always working against him.

Personal Feelings Should Be Subdued

It is one of the hardest things to keep our personal feelings out of the settlement of an unjust or dishonest claim. We like to tell such a man what we think of him, and "get even" with him if we can. But all this sort of thing is taboo with the modern style of doing business. The central idea is the interests of the business. Carefulness in preventing as far as possible the cause for complaints is another principle thing to look out for and exercise on the part of ourselves and employees. Often times it is the little trivial things that have in them the seed of future trade or the loss of a good customer. No doubt some of you have had men quit trading with you and you were ignorant of the cause and entirely innocent of the knowledge of having given them any reason for the action. If you have tried to find out, like as not it was for some little thing in the way of a complaint that you had ignored as not being worth the noticing.

I remember one incident in my earlier experience where a complaint was made by a customer of two lights of glass being broken in a bunch of windows when they were opened out on his job, and he claimed that I should pay what it had cost him to replace them with new lights. I know now, that it was faulty in me to refuse, but he was so cranky and exacting about everything I put out on his bill and besides, I had sold it at such close figures, that this claim was the last straw, so to speak, and I got contrary too, and wouldn't allow the claim. I found out afterwards by the carpenter, that the breakage was made through letting the bunch fall heavily to the ground at the time of unloading, for, as the carpenter said, "I heard the glass jingle." It was many years before that man bought anything of me again and I lost his trade over a pretty small thing which I afterwards regreted. But it takes many years of training in the retail business before one learns that it is best to be less rigid about this class of claims, and give a little rather than to run the chance of losing a much greater benefit to your interests.

Because of Disputed Accounts

A goodly proportion of the claims against us come from disputed accounts. Generally they are not made until the party comes in for a final settlement and more often also, when the party has been pressed for it. The disputed item may be, is one that was got many months previous, and there is no way of proving it was got as charged, except by the entry on the books. There is a possibility of you and your yard men distinctly remembering it, but this is not often the case. It is a hard proposition to go back on one's own books even though the circumstance is not remembered distinctly, and in the absence of holding a receipt from the customer. It is a difficult matter to settle if he insists that the account is not correct. To do it, depends on whether or not the material can be seen and proven by measuring or counting it, or whether the amount in dispute is too small to risk the loss of the customer's trade and gain his future ill will and advertising you as one not to be trusted.

One has to take all these things into consideration. For my part, I am strongly inclined to hold for what my books show, because, as I have told you, I am careful in not letting stuff go out the yard without I know it is correct, and in sending a ticket with the load the buyer has his chance to verify it, by counting it himself. If he don't do this, he has no reasonable comeback on me. One way of avoiding having disputed accounts and difficulty in settling, is to give the buyer a ticket memorandum of the stuff at the time of delivery, and if it is charged to him to send him also a statement of the account the first of the month, and request a careful examination to see if it is correct. Then if there is a dispute about it, it can be more easily remedied while it is fresh in the memory.—C. H. Ketrige in the Mississippi Valley Lumberman.

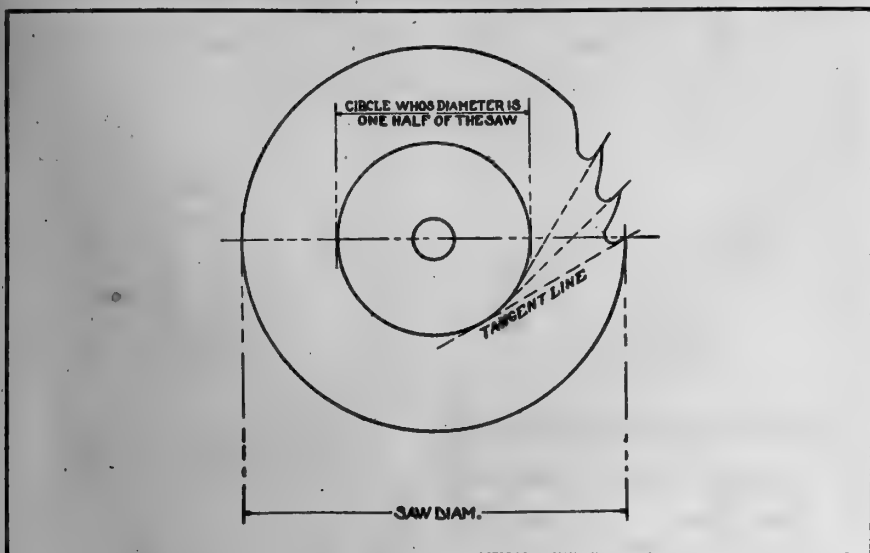
The Duluth office of the H. W. Johns-Manville Company has moved to larger quarters at No. 327 W. First Street, in order to take care of its increased business. The new office is on the ground floor, with windows for the display of J-M Asbestos Roofing, Pipe Coverings, Packings, Sanitary Specialties, Auto Accessories and other products of this company's well known and varied lines.

Hook of Circular Saw Teeth

In the March issue of Simonds Guide for Millmen there was a sentence reading as follows:

"We find in our experience that the hook of a saw to be normal must be tangent to a circle whose diameter is one-half that of the saw."

Several queries as to just what was meant by this expression reached the office of the Simonds Manufacturing Company, and they



realized then that a sketch should have accompanied the article when printed. Here is the explanation. This is standard when you consider a 60-in. saw with about 90 teeth.

The circle which is half the size of the diameter would therefore be 30-in. in diameter, and the line drawn tangent to the circle, that is, merely touching the edge but not intersecting it, determines the proper amount of hook for the saw tooth. This is especially for sawing soft wood.

As the saw is worn down and gets smaller by constant usage, the amount of hook slightly increases, because then you have a smaller saw with the same number of teeth that you had in the original large saw.

Shed Building and Retail Wrinkles

I have just finished a good big shed. I am not going into details about it nor am I going to apologize for making it three storeys high, for every shed I would build on valuable ground I would build three storeys high.

Now there are just two things that I want to tell you about and the one and less important one is to make your shed good and strong in the supporting part, also nailing well the joist that extends out to support the runway or platform, our shed being a large enclosed one with driveway in the center and four foot walk on both storeys, and also nail the cross joists or supports running lengthwise of the shed well. Nail pieces of 2 x 4 on the front and back of the 4 x 6 posts to hold up the joist that support the weight of the lumber. This can be done without taking up any room whatever. You may think of it, and again you might not, so it don't cost you anything to get reminded of it.

Now what you, perhaps, don't know about and had not thought of, is how to brace your shed without losing any room. Now there are all kinds of ways to brace a shed, but our shed was built close beside another shed of like construction and we wanted to build so that if we had a pile of twenty-four feet joist in one shed they could extend over where there was a 12-foot pile in the other shed so that if there would be braces in the rear of either shed they would be in the way.

Well now, how would you go about bracing this shed to avoid losing any room. There was no trouble in bracing the shed to keep it from pitching forward or going backward, for you could brace it well at the ends and in each section from one 4 x 6 to the other upstairs and down; but to keep it from leaning one way or the other longways was the question. Well, we found a way and it did not take up any room, either. We took braces and laid them flatways in each section, crossing them and nailing them in the center.

What I mean is this. The shed had 2 x 10 joist. These joists were nailed two in front, one on each side of the 4 x 6 which stood adgewise, the same in the center and also at rear; mitering the ends of 2 x 4 to fit against the 2 x 10, they make a complete brace so that the shed can't go either way.

They take up no room and are not in the way. After you build

a shed you don't want to lose any room with braces and at the same time you must admit that a poorly braced shed is a total failure.

The Under Dog—Nit

I have always said the truth is what hurts. It doesn't make us mad to be accused of something we never did because we know that we won't have to suffer in reality for that, because if a fellow quits us when we are not to blame he will come back some day and stay and be ours for ever. It is when we feel guilty and know we are at least in part to blame that we get sore.

Well, what I was going to say, that the old "gag" of sympathizing with the "under dog" is a thing of the past. If you expect to get the lumber business on a poverty plea or because you need it, you will get left.

The people nowadays want to trade with the fellow on the top. They want to tie to the fellow who has the "dough." They don't care for the other "fellow." It isn't their fault he isn't rich.

The little fellow has to work his way up and show the buyer of lumber that he is there with the goods and the prices, too.

And, another thing, the lumberman who lets the dead beats talk him out of his lumber on credit or into selling below cost and gets broke, doesn't come in for any sympathy that he can buy anything with.

There is a whole lot of reckless figuring going on in all kinds of business and the lumberman who does not follow a system and know where he is at will, someday, find out that he has only hurt himself instead of the fellow whom he tried to run out of business.

Talking about a clear conscience, reminds me of a very pious old gentleman who came to our yard recently and bought a couple of cans of paint and had a bottle filled with turpentine and one with linseed oil and when he picked up his load he found that he had more than his hands full, so he told me to put the bottles in his pocket. Knowing his ways, I suggested that he let me wrap them up, but he refused and said, "I don't care what people think as long as my conscience is clear," and he was right, too.

And, as to keeping up appearances, I saw a good example of that in our town, or rather we might call it "going where the crowd goes." We had a bunch of Greeks come to our town a couple of years ago. They are an enterprising lot of fellows. They started into the confectionery business. Their competitors laughed at them and called them a gang of Dagos, but after they were here a month they started another store of the same kind and after they were here six months they threw out all their old fixtures and bought the best to be had. Their competitors put the price of ice cream soda down to five cents per glass and used cheap stuff. They put it down to five cents also and used the best to be had. Their competitors cut their light bill down and the Greeks had more and better light put in and when their landlord would not make needed improvements for them, they went ahead and made it themselves, and I have sold these fellows ten times as much lumber as their competitors, who own their own buildings, have bought and they never ask a price either.

They are enterprising and when we hand them a subscription list all they ask is, "How much you want?" And they say, "Put down, here is your money. We pay as we go, then we don't need to sign our name."

No one bothers them for credit and they tend to their own business and their places are popular resorts as none of them worry about anyone else's affairs but their own.

Another Greek trick I noticed at our country fair last fall was played by a bunch of Greeks who follow fairs and carnivals.

These fellows had a concession right next to my exhibit building and we struck miserable weather and in order to sell their ice cream cones they had to "spiel" rather heavy. When business was rather dull three of the four would scatter out into the crowd and when a bunch of people would be going by, the other one would make a talk for his life and the three would rush up and throw down a nickel and grab an ice cream cone and the "spieler" would holler, "Come on, see, see, how the crowd comes. Come, come quick before all are gone; nice and fresh; everybody buy them, etc.," and you know the crowd follows the crowd and they got the business, too.

So it is with the lumber business. If you get the crowd you are all right, but if you haven't the ability to get the crowd, no matter how good a stock you have, it doesn't help you out. Selling cheap doesn't get the business. It only lends a cheap twang to your business, as quality is bound to win in the end.—The Lumber Doctor in the St. Louis Lumberman.

Mr. Chas. E. Read, Jr., formerly of the Riordon Pulp & Paper Company, Limited, and Mr. J. B. White, manager of the wood department and saw mills of the same company, have entered into partnership as wholesale lumber merchants, with offices in the New Birks Building, Montreal. Mr. White, however, is not severing his connection with the Riordon Company.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) (\$2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 28th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 7-t

Wanted

One or two blocks of Spruce, also Pine, must be well manufactured. Apply Box 31, Canada Lumberman, Toronto. 11-t.f.

Wanted To Buy

Two million No. 1, 2 and 3 Pine Lath and one million Hemlock Lath.

M. BRENNEN & SONS,
12-15 Hamilton, Ont.

Wanted

500,000 feet Hard Maple, 1½-in. to 4-in. Also 1-in. Basswood. Shipment Summer and Fall. Terms Cash. Box 32, Canada Lumberman, Toronto. 11-12

Wanted

1,000,000 ft. Spruce, 1-in., 1¼-in. and 2-in. If not already cut will give sawing instructions. Apply Box 30, Canada Lumberman, Toronto. 11-t.f.

Shavings and Sawdust

Wanted to buy. Would prefer shavings baled and separate from the sawdust. Quote prices at your station.

M. BRENNEN & SONS,
7-12 Hamilton, Ont.

Wanted

Soft Elm, 4/4 log run.
Birch, 5/4 log run.
Quote lowest prices F.O.B. mill for dry or new cut.

E. M. NICHOLSON,
9-t.f. Board of Trade Building,
Montreal, Que.

Wanted To Buy—1000 Birch Logs

fresh, clean, straight and sound, 14-in. and up diameter at small end, 8 ft. to 16 ft. long. Delivery to commence as soon as possible. Terms: 75 per cent. cash when alongside track at railway station, balance when loaded on cars. Write P. O. Box No. 1595, Montreal, stating best price. t.f.

Wanted—Large Quantities

1-in. x 5-in. and up No. 1 White Pine Mill Culls.
1¼-in. x 5-in. and up No. 1 White Pine Mill Culls.
1½-in. and 1¾-in. C. & B. White Pine.
Quote prices and state amount for sale. Box 29, Canada Lumberman, Toronto. 11-12

For Sale-Lumber

For Sale

Quantity of first-class cheese box veneer.

G. R. JONES,
10-12 Eldorado, Ont.

For Sale

200 M. ft. Hemlock, 1-in. and 2-in., all sizes and lengths.
70 M. ft. Hard Maple axles, dry Prime stock
50 M. ft. Soft Elm, 1-in.
25 M. ft. Soft Elm, 2-in.
25 M. ft. Soft Elm, 3-in.

Box 33, Canada Lumberman, Toronto. 11-12

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale

2 cars 3 x 4 to 7-in. Sound Maple Hearts.
2 cars 4¼ x 5½ Sound Boxed Maple Hearts
1 car 2½ in. Soft Elm, No. 1 C. & B.
1 car 2-in. Birch, No. 2 C. & B.
4 cars 1½-in. Beech, No. 2 C. & B.
5 cars 1¼ in. Maple, No. 2 C. & B.
Dry stock. Immediate shipment.

Pedwell Hardwood Lumber Co.,
9-t.f. 6 St. Ann's Road,
Toronto, Ont.

\$15,000,000.00

We have about fifteen million dollars worth of timber lands for sale. Write us what you want. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. If you want to buy or sell write us.

THE JANESVILLE EXCHANGE,
Timber Department,
1-t.f. Janesville, Wisconsin.

For Sale-Machinery

For Sale—Cheap

1 Pony Planer, McGregor & Gourlay, 24-in., in good running condition.
1 Iron Saw Table 3 ft. x 5 ft., Ballantyne Tilting Guide.

Box 28, Canada Lumberman, Toronto. 11-13

Boilers For Sale

Two Horizontal Return Tubular Boilers, 66 in. diameter by 16 ft. long. 100 lbs. working pressure at present in use. Apply to

The Steel Company of Canada, Limited,
12 Montreal, Que.

Engine For Sale

15 in. x 34 in. single cylinder Wheelock, left hand, with pulley and flywheel. In the very best condition. Can be seen in operation. Write

The Steel Company of Canada, Limited,
12 Montreal, Que.

Second Hand Machinery

150 to 175 h.p. Corliss Engine, 16-in. x 36-in., new two years ago.
75 to 100 h.p. Brown Automatic, 13-in. x 30-in., in excellent condition.
500 to 750 h.p. Buckeye; a good sawmill engine.
Boilers, 72-in. x 18-ft. and 54-in. x 14-ft.

THOMAS HOBBS,
7-t.f. Mail Building,
Toronto, Ont.

Engine For Sale

Single cylinder Corliss Engine, 18 in. x 42 in. Cylinder, 14 ft. flywheel, right hand. Can be seen in operation. Apply to

The Steel Company of Canada Limited,
12 Montreal, Que.

WOODWORKING MACHINERY FOR SALE: 1 MacGregor-Gourlay variable power feed saw table; 4 30-in. Ideal pedestal band-saws; 1 54-in. Jackson-Cochrane band saw; 1 24-in. Ideal planer, matcher and moulder; 1 32-in. disk sander with boring attachment; 1 No. 51 Crescent universal wood-worker; 1 sash and door tenoner with cut-off attachment; 1 8-in. three side moulder; 1 25-gallon Advance glue heater with warming chamber and 8 2-quart pots. H. W. Petrie, Limited, Toronto. 12

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Saw filer, band or circular, wants position. 25 years' good experience. No booze fighter. Good references. Can give satisfaction. Box 300, Canada Lumberman, 119 Board of Trade, Montreal. 9-12

BOOK-KEEPER wants position in saw mill. Worked in mill for five years previous to taking business course. Can scale and cull lumber. Box 40, Canada Lumberman, Toronto. 12

Situation wanted by married man, thirty years old, as Accountant, Chief Clerk or Secretary-Treasurer in a Wholesale Lumber Firm. Ten years' experience. Best of recommendations. Apply to Accountant, P. O. Box 69, Three Rivers, Que. 12-18

A thoroughly practical lumberman wishes to connect with reliable firm either as salesman or buyer. Ten years as partner in well-known Ontario lumber firm—six years' experience selling on road. Familiar with every angle of lumber business. Would consider salary or commission proposition. Best of references. Full particulars from Box 37, Canada Lumberman, Toronto. 12-1

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents

WANTED—A young man with experience as salesman for sash and door factory. Apply to Box 38, Canada Lumberman, Toronto. 12-15

YARD FOREMAN wanted by medium sized factory in Western Ontario. Must be qualified to inspect hardwood lumber, and able to handle men unloading and piling. Apply, stating qualifications, to Box 36, Canada Lumberman, Toronto. 12-13

WANTED—Salesman calling on the lumber trade and contractors in the Eastern Provinces, to handle Dr. J. M. Stewart's Veterinary Remedies as side line.

Palmer Medical Company, Ltd.,
10-t.f. Windsor, Ont.

Business Chances

Business Opportunity

For Sale—Woodworking shop fitted especially for general work. New and up-to-date machinery. First class dry kiln. Blower system. Railway siding. Situated in a live and thriving Ontario town. Splendid local and shipping trade. This is an exceptional opportunity to acquire a good business with a trade already established.

Write J. A. C., Canada Lumberman, Toronto. 10-12

For Sale

500 square miles Crown Lands, St. Lawrence River. Front limit. All improvements. 1,500,000,000 feet Spruce, Pine, etc. If interested write Box 35, Canada Lumberman, Toronto. 12

For Sale

Complete sawmill outfit. Machinery practically new. Capacity 20 M. Two boilers 60 and 40 h.p., with cold blast grates, endless log chain, 8-in. steam feed; 3 block carriage with boss dogs; friction canter and sweep; 3 saw edger; 2 saw trimmers and a full complement of saws and belting. Also Long Mfg. Co. lath mill in first class condition will be sold with sawmill or separately. Mill near White Hall, Ont. Apply to Box 41, Jordan Harbor, Ont. 11-14

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont. 6

For Sale

Rare bargain. Band mill located in best lumber and log center on Puget Sound. Rail and cargo shipping facilities. Excellent log pond. Ten and a half acres of land. Price one-fourth of appraised valuation. Must sell quick. Box 765, Canada Lumberman, Toronto, Ont. 8-t.f.

For Sale

The best timber berth in Alberta, containing approximately one hundred million feet, four-fifths of which is splendid spruce. A railroad will pass within one mile of the limit this summer. The situation makes it an exceedingly easy limit to operate. Price \$2.00 per M., easy terms. On account of its close proximity to the prairie markets and easy logging, this is cheaper than B. C. timber for nothing. For further information apply to Box 25, Canada Lumberman, Toronto. 11-14



Timber Sale

Tenders will be received by the undersigned up to noon of the 6th day of July, 1914, for the right to cut the Red and White Pine timber on Berths 1 B, 1 C, and 1 D, in the Missisaga Forest Reserve tributary to the north shore of Lake Huron, each Berth containing an area of 36 square miles, more or less.

For maps and conditions of sale apply to the undersigned or the Crown Timber Agents at Thessalon, Sault Ste. Marie, Webbwood and Sudbury.

W. H. HEARST,
Minister of Lands, Forests and Mines.
Toronto, April 18th, 1914.

N.B.—No unauthorized publication of this notice will be paid for. 9-13



Timber Sale

Tenders will be received by the undersigned up to noon of the 15th day of July, 1914, for the right to cut the Red and White Pine timber on berths 1, 2 and 3, Township of Blyth, in the District of Nipissing.

For maps and conditions of sale apply to the undersigned, or the Crown Timber Agents at Sudbury and North Bay.

W. H. HEARST,
Minister of Lands, Forests and Mines.
Toronto, May 4th, 1914.

N.B. No unauthorized publication of this notice will be paid for. 10-13

For Sale

Timber limit consisting of 10,000,000 feet of Pine, Spruce, Hemlock and Hardwood, tributary to Lake Nipissing. Also sawmill and logging outfit, boom timber and chains. Good reason for selling. For particulars address Box 846, Canada Lumberman, Toronto. 19-t.f.

Fine Timber Tracts

We have a number of timber tracts for sale in most all states at low prices and reasonable terms. Have few bargain tracts that are offered for quick sale. Write us what you want, we have it.

THE JANESVILLE EXCHANGE, Timber Dept., Janesville, Wis. Dealers in timber lands, lumber yards, mill machinery, mills for sale, arranging loans, selling and exchanging cut-over lands, and a general real-estate business. 1-t.f.

**Sale of Pine Timber on Metagami Indian Reserve**

Tenders will be received by the undersigned up to and including the 6th day of July next for the right to cut the Red, White and Jack Pine timber over eight inches in diameter on the Metagami Indian Reserve, situate on the Metagami River in the District of Sudbury. For particulars, descriptions, conditions, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines.

Department of Lands, Forests and Mines, Toronto, May 2nd, 1914.

No unauthorized publication of this notice will be paid for. 10-13

**Tenders for Allan Water River Wood Limit**

Tenders will be received by the undersigned up to and including Wednesday, the 15th of July next for the right to cut ties from Spruce, Balsam, Banksian or Jack Pine, Poplar and Whitewood trees seven inches and upwards in diameter two feet from the ground sufficient to supply a tie preserving plant for a period of twenty-one years from unoccupied, unsold and unlocated lands of the Crown tributary to what is known as the Allan Water River, tributary to the Grand Trunk Pacific Railway in the District of Thunder Bay.

Tenderers shall state the amount they are prepared to pay as bonus in addition to the Crown dues of \$2 per thousand feet board measure for anything not manufactured into ties, and for ties at the rate of 5c each, or such other rates as may from time to time be fixed by the Lieutenant-Governor in Council.

Such tenderers shall be required to erect within the limits of the territory covered by the right to cut ties, or at some other place approved by the Lieutenant-Governor in Council a tie preserving plant.

Parties making tender will be required to deposit with their tender a marked cheque payable to the Honourable the Treasurer of the Province of Ontario for \$25,000, to remain on deposit as security for the carrying out of the conditions of their tender.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

W. H. HEARST,

Minister of Lands, Forests and Mines.

Toronto, Ont., April 27th, 1914. 10-13

Do You Want to Buy or Sell?

If you wish to purchase or dispose of a particular stock of lumber or logs, a mill property or timber limit, or some second-hand machinery, the CANADA LUMBERMAN AND WOODWORKER will bring quick returns. Use our "Wanted and For Sale Department."

Miscellaneous**Saw Mill Machinery For Sale**

Sawmill near Sellwood, Ontario, daily capacity 60,000 feet. All machinery including:—Log Loader, Bullwheel, Steam Kicker, Log Loader, Stationary Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8 ft. Double Cutting Bandmill, Cast Iron Lumber Table, 5-Saw Slab Slasher, 48-in. Big Champion Edger, Trimmer, Transfers to Edger and Trimmer Tables, Sorting Tables, etc. Also, Independent Lathmill, Filing Room Outfit and Power Plant complete. This machinery is of the latest design, practically new and in excellent condition. Offers will be accepted for all or any part of this machinery, where it stands or F.O.B. cars Sellwood.

The Waterous Engine Works Company, 22-t.f. Brantford, Canada.

A Plentiful Supply of Cars

The greatest surplus of freight cars shown by any report since January 6, 1909, was on May 15, 1914, when the total surplus was 239,406 cars, an increase of about 9,000 cars over the figures of May 1. This is according to the semi-monthly report of the committee on relations between railroads of the American Railway Association, issued May 22. Evidently the railroad situation has been under heavy tension the same as other business and it is doubtless awaiting a favorable decision from the Interstate Commerce Commission before business can be expected to revive.

It is interesting to note that the surplus of 239,406 cars on May 15 was made up of 82,890 idle box cars, 8,611 idle flat cars, 99,664 idle coal, gondola and hopper cars and 48,241 idle cars of miscellaneous types.

Another interesting feature in connection with the report is that the greatest surplus shown in any district of the country is in Group 3, comprising Ohio, Indiana, Michigan and western Pennsylvania, where the surplus is 66,450 cars, an increase of nearly 10,000 in the surplus in that district during the previous fortnight. Of this surplus 50,029 cars are coal cars alone.

The Sapsucker's Bill

The sapsucker is a pretty small bird, but he is very active along certain lines. It is claimed that his bill is one of the most expensive articles of its size in this country. He is fond of exercising on the hickory tree by picking a few thousand holes weekly through the bark during spring and early summer when the sweet sap is flowing. He goes from hole to hole after he has pecked them, and sucks the sap that accumulates. The holes are about as large as would be made by a small nail. In after years "bird-pecked hickory" is the result. The wood is discolored in the immediate vicinity of the holes and every year many thousand feet of choice hickory is degraded or rejected on account of this damage. The sap

obtained from that source is pretty rich diet for the little yellow hammer that does most of the picking. For the sake of a May morning meal of the sweet juice he spoils enough wood to make a buggy wheel. There is no remedy, as far as known. It is useless to try to catch, kill, scare, or intimidate the sapsucker, and make him quit. He can dodge round a hickory trunk faster than anybody can follow him, and he pecks as he goes. Apparently, he does no good to offset his evil; for he catches no bark bugs or wood beetles, destroys no caterpillars, eats no aphids or cynips, or in any way wars on the enemies of hickory during the period when the sap is obtainable. His bill strikes with the rapidity of a riveting machine from five in the morning until the whippoorwill calls him off at twilight.

Working Freshly-ripped Lumber

One of the reasons given for the giving way sometimes of glue joints in lumber glued up to make width is that the lumber is used too soon after edging or ripping. It is argued that after lumber is cross-cut and ripped up by the stock sawyer it should be allowed to stand for a day or two before working on the machines, and especially before glue-jointing. This argument is based on the idea that cutting the stock up into smaller dimensions perhaps releases some of the internal strain of the lumber and permits it to set up others, and that it should be given a little time to adjust itself.

This is perhaps good argument except where it involves the use of smaller pieces of lumber that may be prevented from warping and twisting by gluing together. Where one is gluing up narrow strips into door stock, for example, the better plan is to work them up soon after they are ripped, because when once glued up into a mass the internal strain of each piece is counteracted and overcome. It is well enough, however, to remember that in ripping out solid stock for door

stiles or other work it is a good idea to rip it out and let it stand for a few days before using, that it may adjust itself to the new conditions as to strains, etc.

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Water Powers, Storage, Logging and Lumbering Contracts, Reports for Financial Houses and Lumber Concerns.

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164 St. James Street, MONTREAL



Cleans a building of Rats and Mice in short time, keeps it cleaned, for it is always ready for use. Made of galvanized iron, can't get out of order, lasts for years. Large number can be caught daily. Go to Catcher mornings, remove device inside, which only takes few seconds, take out dead rats and mice, replace device, it is ready for another catch. Small piece cheese is used, doing away with poisons. Catcher is 18 inches high, 10 inches diameter. When rats pass device they die, no marks left on them. Catcher is always clean. One of these Catchers set in a livery stable in Scranton, Pa., caught over 100 rats in a month. One sent prepaid to any place in Canada or United States upon receipt of \$3. Catcher, 8 in. high, for mice only, prepaid \$1. On account of shipping charges being prepaid, remittance is requested with order. H. D. SWARTS, Inventor and Manufacturer, Scranton, Pa.

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15,000 ft. of 3" No. 1 C. & B. Maple
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Review of Current Trade Conditions

Ontario

The trade in lumber in Ontario to-day is probably in a more curious position than it has been for a long time past. One can find firms of retailers, wholesalers and manufacturers, who report that they have all the business they can handle and one can also find firms which report that the bottom has fallen out of trade. Those who report plenty of business however, are very scarce. When one seeks for information upon trade details he cannot get it, as no one seems to have it. The discussion invariably turns upon crops and railroads and how long the quietness will last. In spite of the dullness, there is quite a good volume of business in progress, and lumbermen, on account of not having overproduced, in Ontario, are not feeling the strain so badly as some others. Many reports have now been received regarding driving conditions and it looks as though the quantity of logs left in the woods this year will be much larger than usual. In the Ottawa Valley some operators have been obliged to abandon large quantities of logs until next season. In northern Ontario, most of the logs have come out, but the cost has been much greater.

A little improvement is reported in the trade at Ottawa, particularly in the export business. Prices however, remain unchanged with the volume of business light. Driving conditions have been far from satisfactory in many cases in the Ottawa Valley and reports received by the Canada Lumberman indicate important reductions in the output of some of the larger mills. One of the largest manufacturing companies in Ottawa is even reported to be considering the advisability of closing down its plant temporarily, partly on account of the poor market conditions and partly on account of the large quantity of logs which it has not been able to drive from the woods to the mill.

Eastern Canada

A little improvement is reported from St. John. House building operations have increased considerably during the past fortnight and are using up extensive quantities of spruce. Prices generally are unchanged, but manufacturers are showing no inclination to encourage weakness in the market. Those who have American stock will probably hold it until later on. Stocks of English deals are light and business in the English market is only fair. No deals are being offered at St. John as all stocks have been sold ahead. It is likely however, that present prices would be about one dollar a thousand less than those of early spring. Lath are steady at \$2.90 to \$3 on the wharves at St. John and stocks are light. Shingles are slow and about 25c per thousand lower than a year ago. Cedar logs are scarce at St. John and may have a tendency to steady the market. Most of the drives at the head of the St. John are in safe waters. The Kilburn drive is not expected to come out and this will reduce the amount rafted at Fredericton by seven or eight million feet, leaving the total about 45 or 47 million feet. At the recent "no mark" sale, spruce deal logs brought about \$15.75, and spruce battens about two-thirds of this price. Cedar logs sold at \$12, pine at \$11 and hemlock at \$19.

The demand for eastern spruce at Boston did not attain the volume which was expected during the spring season and the price in connection with most of the transactions for dimension stock is about \$24. A few mills are asking \$24.50. Some reports are to the effect that the base price of eastern spruce may go lower. Random is selling at unchanged prices, the quotations are not quite so firm. There is some business now in 2 x 4 at \$22, and \$22.50 is the top price. For 2 x 3, the price is \$21 and \$21.50. Other prices are as follows:—2 x 5, \$20 to \$21; 2 x 6 and 2 x 7, \$20.50 to \$21; 2 x 8, \$22.50 to \$23; 2 x 10, \$24 to \$24.50; 2 x 12, \$24.50 to \$25. At New York the price of eastern spruce continues steady, but the yards are not buying much in advance of their requirements, as the building demand is dull. Wholesalers are not undertaking any extensive contracts, as they expect to see a much stronger price situation some time in the near future. The demand for lath at Boston is falling behind the supply and prices are a bit uncertain. Recent sales for 1½-in. at \$4 have been reported and some makers of good lath have been securing \$4.25 from particular customers. The going price to-day is probably \$4.15, with a tendency towards accepting less. Most of the sales of 1½-in. are at \$3.70 with a little business at \$3.75 and \$3.80. British Columbia cedars are not so strong as they were recently. Excellent British Columbia extras are offered at \$3.55. Washington shingles are quoted at \$3.25 to \$3.65.

United States

The lumber trade in the United States is still limited in extent and responds but little to any reports of good crops or other business improvements which appear from time to time. It is now rather gener-

ally believed that there will be no important improvement in trade until after the summer months. Already there are signs of the trade settling down to a summer basis. Since last fall there has been no really normal trade in existence and for this reason the actual settling down to a summer basis consists rather in continuing at current prices with a slightly less active demand. Large industrial concerns, and the railroads, are keeping out of the market for supplies in excess of their current requirements. A great deal of attention is being paid by the lumber trade to the probable outcome of the growing crops. The present outlook is very promising and it looks as though, when the crops are ready for movement, the railroads will be badly in need of rolling stock. They have not been keeping up their equipment, and a car shortage can scarcely be avoided. For this reason it is generally believed that retailers would be well advised to make their purchases for the late summer and fall trade, at present, when prices for lumber of all kinds are probably as low as they will ever be. Prices are expected to continue along the present basis until a more pronounced demand develops.

Northern pine stocks in eastern markets are well assorted. Hemlock is unchanged. The demand is not so extensive as it was a year ago. Dry stocks are not any too plentiful and manufacturers expect the building demand to take care of everything. The building demand at Buffalo is considerably better. Stocks at Pennsylvania mills are scarce and many of the manufacturers are refusing to meet present low prices. The hardwood trade is still of a hand-to-mouth character, but manufacturers are holding up prices well. It is expected that business will be better a little later in the year. Dry birch and maple are scarce. Prices are firm and those who own any quantity of dry stock are satisfied with conditions. Reports from the east state that stocks of eastern spruce are gradually accumulating at mill points. The market lacks snap, as a result of the poor weather conditions which prevailed during the spring and reduced the volume of building operations. Prices continue fairly firm.

Great Britain

Little or no change is reported in lumber trade conditions at London. The volume of business is fair. The deliveries at London docks for the week ending May 23rd amounted to 4,983 standards as compared with 5,979 standards during the corresponding week of 1913. At Churchill and Sim's recent auction sale second Montreal spruce 3 x 9 brought £12. Third Quebec sold at £11 10s., fourth at £10 10s. and fifth at £9 10s. Second Montreal spruce 3 x 7 brought £9 15s. A temporary lull in trade is in progress in Liverpool on account of the holiday season. Timber arrivals have been only moderate. Pine shipments are now reaching Liverpool steadily from eastern Canada. Freights naturally have a great deal to do with current wholesale timber values. North American freights show little change and 36s. 3d. has been taken for deals from Miramichi to west coast of Great Britain and the east coast of Ireland for June loading. Spruce deals are being offered freely at Manchester and the arrivals onhand and expected include many useful and handy parcels for June and July shipments. There is a good deal of uncertainty as to the probable course of prices. The building and many other industries are busy and there are prospects of a good summer.

The timber trade at Glasgow continues quiet and of moderate dimensions. Most of the demand comes from the shipping yards, but even from this direction the demand is less than usual. Consignments of Quebec goods have consisted chiefly of birch logs, which have met with ready sale at firm prices on "ex quay" terms. Other arrivals from Quebec and Montreal have consisted largely of contract deliveries. The only sales of pine reported are a few stacks of 11 x 3-in. third and some sidings. Spruce transactions are also very few. Values are only maintained with some difficulty.

At the meeting of the Royal Society held in Montreal, Dr. C. Gordon Hewitt, Dominion Entomologist, read a paper describing the enormous damage to timber by insects. More was destroyed in this manner, he stated, than by fire. The destructive action of insects is not so easily appreciated on account of the insidiousness of their work, while the damage done by forest fires is realized because it is so apparent. Dr. Hewitt said that a loss in the forests of the United States of over \$60,000,000 annually was due to insects. He showed how insect-injured timber is more readily consumed by fire, while that scorched by fire is most likely to be killed outright by the subsequent attacks of insects. No system of fire protection, therefore, he continued, would be effectual unless insect control were included,

B. P. BOLE, Pres. F. H. GOFF, Vice-Pres. E. C. BARRE, Gen. Mgr. W. A. SAURWEIN, Ass't. Mgr.

Cleveland-Sarnia Sawmills Co., Limited

Sarnia, Ontario



View of Mills in Sarnia.

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Norway and White
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Large timbers cut to order, any length up to 60 feet, from Pine and B.C. Fir.

Headquarters for Norway Silo Stock.

Market Correspondence

**SPECIAL REPORTS
ON CONDITIONS AT
HOME AND ABROAD**

Ottawa Market Still Quiet

Ottawa, June 8th (Special to the Canada Lumberman): Though trade has shown some slight improvement since the last writing, it is still far from being as satisfactory as manufacturers and dealers would like. The slight improvement noted recently has been general, including export. Prices remain unaltered with the exception of mill cull shorts, 1-in. by 4-in., and up 6-ft. to 11-ft., which have advanced from \$16.50 and \$17 to \$17 and \$18.

Unless some very heavy rains come soon, operations along the streams tributary to the Ottawa River are likely to be stopped. The unusually dry weather of the past six weeks has caused a serious scarcity of water. Gilmour and Hughson's mills up the Gatineau will close down shortly if the dry period continues, which will mean throwing about 150 men out of work. Mr. Grant Davidson, manager of the Estate James Davidson says the firm hoped to cut between 12 and 15 millions feet of lumber this year at their mills at Davidson, Qué., on the Coulonge River, but it looks now as if 175 men at the mills will have to be laid off soon and the plants closed down owing to lack of water. Firms operating on the Ottawa are not likely to be inconvenienced. The outlook is that this year's cut will be considerably smaller than last year.

Fires Cause Much Damage

Recent rains prevented the bush fires, which were raging in several parts of the Ottawa Valley from doing very serious damage. One of the heaviest losers by the fires was the Colonial Lumber Company, of Pembroke. Fire got into a valuable pine limit they owned in the Kippewa district and did several thousand dollars' worth of damage. Last week a fire started from some unknown cause, completely destroyed the lumber plant of R. T. Ritchie, Limited, Aylmer, and threw 150 out of employment. The loss is estimated at \$75,000 against which there was \$50,000 insurance. The volunteer fire brigade made a determined effort to prevent the fire from spreading. It started in a shingle mill, but the flames spread quickly to the body of the plant and it, with all the machinery and a big lumber cut, was soon destroyed. Sparks from fireworks, are said to have been the cause of the fire which wiped out some big piles of lumber and useful buildings at the yards of Barret Brothers, Catherine street, Ottawa. The loss was \$20,000 covered by insurance.

An order for five portable houses, built of three-ply seven-eighth white pine, has been given by the Dominion Government to the Estate James Davidson. The houses are to be used by the Royal North West Mounted Police at their Hudson Bay Station. A former order, placed last fall, was shipped, but had to be thrown overboard while the vessel in which they were being shipped was in danger during a storm. The value of the five portable houses is \$4,000.

Lumbermen generally are opposing the clause in the amended Railway Act, now before the government for consideration, which aims to put inland water carriers under the control of the Railway Commission, with respect to rates. Mr. Frank Hawkins, secretary of the Canadian Lumbermen's Association, was present at the last meeting of the joint committee of the Commons and the Senate which is handling the bill, but was not given an opportunity to air his objections to the clause in question. The act, however, as amended will not be passed this session of Parliament, but will be introduced early next session. Big shippers of lumber say, if the inland carriers are placed under the jurisdiction of the Railway Commission, they will be deprived of making contracts that will give them a special rate.

Pembroke Company to Get Amount it Claimed

The claim of \$122,000 made by the Pembroke Lumber Company, against the Militia Department, for compensation for the expropriation of a large tract of land adjoining the Petawawa military training camp, will be paid by the government. When the supplementary estimates came before the House last Saturday considerable criticism was made against the payment of the claim by members of the opposition, who claimed the amount was too large. Col. Hon. Sam Hughes, Minister of Militia, informed his critics that the price had been deemed reasonable by an independent board of arbitrators.

A verdict against the Vancouver Lumber Company was given last week by Mr. Justice Cassells, in the Exchequer Court, in the case of the King vs. the company. The suit, which has been before the courts for sometime, was over Deadman's Island, near Vancouver. The company claimed the property under a deed executed by Sir

Frederick Borden, former Minister of Militia, in 1899. Judge Cassells ruled that Sir Frederick issued the deed without proper authority.

In declaring himself out and out in favor of free trade in the Senate the other day, Senator Edwards stated that he derived no benefit from a protective tariff.

"How about cement duties?" queried Senator Murphy.

"I do not derive a dollar from cement" replied Senator Edwards. I am a lumber manufacturer. I make my living from lumber and a very poor living too, at the present time when we are selling some kinds of dressed lumber in Toronto for \$21 per 1,000 feet while it costs us that much to put our logs on the ice." Senator Edwards urged that as the United States is ignoring protective tariffs Canada should follow suit.

Among the survivors from the recent wreck of the Empress of Ireland was Mr. J. H. Black, accountant for J. R. Booth, who with his wife was making a trip to England and France. Another survivor was Mr. Edward Seybold, of Ottawa, a relative of Mr. Booth.

St. John Market Shows Slight Improvement

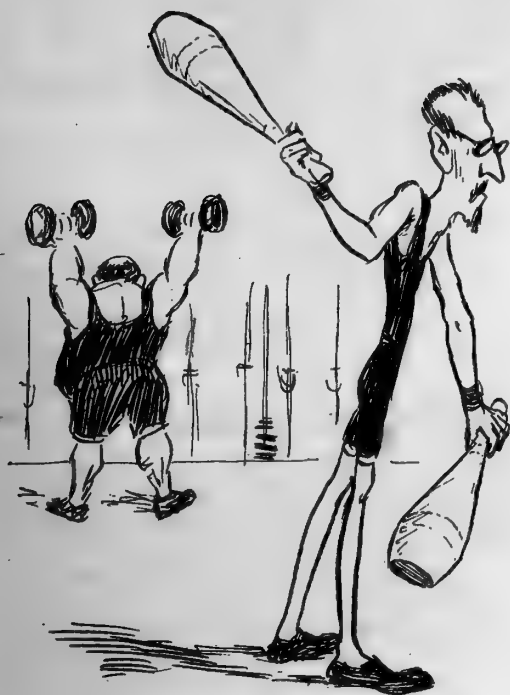
St. John, N.B., June 5th (Special to the Canada Lumberman): Locally, there is some change for the better in the lumber market. House building operations have enlarged very much during the past two weeks and calls for order spruce for these buildings are coming along fast. Of course, there is no boom in building, but the increase is felt to some extent on account of the slackness during the entire spring, there being practically no business to be had. Prices remain unchanged, from last reports, and are bringing no higher returns than last season. If anything the returns are somewhat less, largely due to the weakness of both English and American markets. Very few enquiries are coming forward from the American market for spruce, and any persons who are looking for stock expect to buy at bargain prices. Very few of the mills at St. John are open to do business under these conditions and if they have any American stock will hold until later. Only two mills, viz., Stetson Cutler & Company are sawing for the American market, the balance sawing English deals. Messrs. Stetson Cutler & Company have about six vessels loading here for the United States with laths and long lumber, much of which has been placed ahead on order.

No large stocks of English deals are on hand here, as the shippers have been each loading a steamer cargo, mostly with outside deals, but some taken from the city mills, these mills being late in starting. No great stocks have been sawn ahead. Business in the English market is only fair, and it is said that Baltic stocks are being sold at a reduction. This will probably reflect upon spruce from this side, but it is to be hoped that business conditions in England will be so restored as to bring confidence to the buyers of spruce. No deals are being offered here as all stocks have been sold ahead, but probably any person having a cut to offer would have to sell at at least a dollar per M. less than early spring prices.

Laths are holding fairly steadily at from \$2.90 to \$3.00 per M. on wharves here, with no heavy stocks on hand. A new law has been passed in New York State whereby the manufacturer, wholesaler or retailer is supposed to stencil each bundle of laths marking the number of pieces in the bundle. This, the manufacturers here have not yet started to do, and if they should be called upon to do so it will cause no end of trouble. The manufacturer would be unable to count each bundle himself. Therefore he would be at the mercy of his help, who are, in many cases not responsible, and if he were called upon to take oath to so many laths to bundle he could not conscientiously do so. It is to be hoped that some solution may be had to this difficulty before the new law comes generally into effect.

Shingles are selling hard, and prices are off to about 25c per M. less than last year with buyers hard to find. The stock of cedar logs at St. John will not keep the mills which saw shingles at work over half the season. This probably is a good thing as it may have some tendency to be a steadying influence on the market.

All the drives on the head of the St. John, with the exception of John Kilburn for Murray & Gregory, are in safe waters. Mr. Kilburn it is felt cannot get his drive to booms this season, being far from the main St. John and still in the brooks, and once a brook drive is abandoned on the upper St. John it is hardly possible to get men back upon it soon enough should rain come to do any driving. Probably between 7 and 8 million feet of logs will be left. This will shorten the amount for rafting at Fredericton booms down to about 45 to 47 million instead of 54 million which was the first calculation. The drive in the



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**WE CARRY THE LARGEST AND BEST ASSORTMENT
OF DRY SPRUCE IN CANADA**

Madawaska corporation are doing good work and have at this date a good pitch of water, although it is falling fast on account of the dry season. The St. John River Log Driving Company have brought in their first drive and returned for the second on the section between Grand Falls and Fredericton.

About all the bank logs have been delivered to St. John, prices for logs remain firm.

Fires have occurred in the forest in this section of the country but have not done any great harm as they occurred in a largely burnt over country on which the growth did not amount to much. Rain has fallen to-day and extinguished them entirely.

Rafting operations will begin at the Fredericton Boom Company's plant about June the 8th.

The "no mark" and mixed mark logs from the spring drift drive were sold during the past week and brought the following prices. Spruce deal logs \$15.75 per M. Spruce battens, 2-3 of \$15.75, sold to Murray & Gregory. Cedar, to Messrs. Stetson Cutler & Company, at \$12.00. Pine, to Chas. Miller, at \$11.00 per M. Hemlock, to Murray & Gregory, at \$10.00 per M. The "no mark" and "five hack" logs which will be rafted at Fredericton during the coming season will be sold by auction during the next two weeks.

Trade Still Slow at Montreal

Montreal, June 9th (Special to the Canada Lumberman): Trade is slow, and as far as can be seen there is little prospect of any marked revival. Some retailers state that they are doing a fair business, but taking the market generally, there is nothing to talk about. Stocks are very short. Hemlock, spruce, and low ends of pine are extremely scarce, and some descriptions of dry lath cannot be obtained.

The building permit figures are not encouraging. For the month of May they were \$2,517,148, an increase of \$43,540, while for the year to date they were \$6,578,501, a decrease of \$1,085,630. There is talk of labour trouble, and many of the carpenters have struck owing to the refusal of the contractors to increase wages from 42½c to 45c per hour and to concede an eight-hour day.

Reports from this province indicate that the continued dry weather has had a very bad effect on driving operations. A great many logs are piled up, and will not be got out this year.

Sash and door factories are doing a small business and competition is very keen.

Exports are on a larger scale, and Watson and Todd, the largest shippers in the port, are now sending pine to the other side. Shipments of this lumber and of birch, however, are still comparatively light, and the total exports this season are likely to show a considerable falling off.

A company possessing very large limits in the province reports a very active demand for spruce by United States buyers.

Mr. H. M. Williams, of the Williams Lumber Company, Ottawa, purchased at public auction, the stock of lumber, mouldings, etc., of Ouellette Beaulieu, Limited, sash and door manufacturers, Longueuil, P.Q., in liquidation. The price paid was 50c on the dollar.

The absence of rains, which has lowered the streams to a degree not known for many years, will have a very material influence on the supplies of pulpwood, and consequently on the quantity of pulp and paper manufactured. The situation is practically the same in the State of Maine, and west of there the streams are rapidly falling. These circumstances will place ground wood in a stronger position than it has been in for three years, and with ground wood higher, prices of news print are likely to rise. It is more than probable that there will be a good market for all the ground wood that Canadian mills can manufacture and put into stock before the summer is over.

Chemical pulp is steady. The competition of European pulp has been very keen since the removal of the duty in the United States, and it is understood that there have been some spot lots offered under market prices. These lots are pretty well cleaned up, and foreign pulp for 1915 is not procurable at present prices. Although current quotations will probably prevail during the summer season, all indications point to a better demand after August, and with a more active demand, higher prices will rule for this class of pulp.

Dullness Continues at New York

Chase, Talbot & Company, New York, in their lumber market letter under date of June 1st write as follows: In the Metropolitan District we have progressed (or retrograded) to that condition in the lumber trade where the question seems to be one of who needs "the order" most. Values apparently have no relation to cost of production. Unquestionably, it is a buyer's market. The volume is small but very likely would be greatly increased and at a higher range of prices if buyers could look with favor upon pending legislation at Washington. The mid-year term is close at hand and unless the trade

soon takes on new life, we shall be forced to record the obituary of 1914.

Prices current for stock delivered on dock to yard dealers are as follows:—Eastern spruce dimension average domestic schedules, \$24 to \$26. Ordinary spruce domestic random, \$23 to \$25. Provincial spruce random \$21 to \$22. West Virginia and Penn. spruce, \$3 per M. off the list. Eastern hemlock dimension, \$21 to \$23. Eastern hemlock random, \$19 to \$20. North Carolina pine roofers \$18.50 to \$19.50. Long-leaf merchantable yellow pine dimension, \$22 to \$25. Short-leaf yellow pine dimension, \$18.50 to \$20. Pacific Coast merchantable Douglas fir dimension, \$21.50 to \$23.50. Eastern spruce laths, \$4.00 to \$4.25. Pacific Coast fir laths, \$3.75 to \$4.00.

The New York State Legislature recently passed a bill to take effect to-day providing for the stenciling or tagging or all laths in bundles marketed in this State, which marking must state the exact count of pieces in each bundle and requiring that bundles average not less than 100 pieces for full bundles or 50 pieces for half bundles.

Barbados Market Report

S. P. Musson, Son & Company, Barbados, report under date of May 22nd as follows:—Lumberstuffs—White pine—There have been no arrivals during the fortnight, but there are ample stocks in dealers' yards. Spruce—no receipts, but dealers have sufficient stocks on hand for present requirements. Pitch pine—No arrivals but the market is amply supplied. Shingles—No receipts of either Extra No. 1, or Long Gaspe, but one or two cargoes of the former have been contracted for. Shooks—No arrivals. Wood hoops—receipts consist of 500 by the S.S. "Serrana," imported on dealers' account.

Efficiency in the Planing Mill Business

The man of most importance in the conduct of a planing mill business is the one who does the estimating, for on him rests the responsibility of keeping the plant in operation with profitable business.

There are mill estimators whose knowledge of costs is entirely conjectural; they have never had the experience of following lumber from the yard, through the machinery and bench department, until it landed in the shipping room, a finished product, therefore, the only thing they know about cost of production is what some one has told them.

Many times they have been told correctly and sometimes they have remembered and estimated properly, but an estimator, to be efficient, should have an elementary knowledge of the process of manufacturing the articles on which he places an arbitrary price.

Equipped with this basic information, he can analyze a frame, a sash, a column, a door, a portico or a buffet into its component parts of material, machine work and bench work; can place an intelligent valuation on each segregation and to the total can add the proportionate amount of overhead expense and the margin of profit, which good judgment and sound business policy dictates.

Taken altogether, a reliable estimator must have a working knowledge of the product he is pricing, that is, his knowledge of machinery and mechanical construction should enable him to go into the shop and superintend any department; his knowledge of costs gained from personal experience in converting raw material into the finished product should enable him to properly price any article of millwork shown on a set of building plans or described in the specifications; his knowledge of plans must be thorough, and his reading of specifications critical in order not to overlook items of importance; the quantities he takes off must be accurate, otherwise the total, if too large, would result in losing the job, and if too small, in securing it at a loss.

The estimator must also know the competitive conditions existing on the particular job he is figuring, that is, he must know the idiosyncrasies of the architect and the extent he can be swayed into modifying expensive construction, he must know the contractors who are figuring and how many of them can be depended on to give him a square deal or possibly a little the best of it, he must know which of his competitors are figuring the same job and whether they are liable to be high or low, the latter sometimes determined by the amount of work the competitor has on hand, sometimes by a similarity of religious or political opinions held by the owner and the other millman, and occasionally by the fact that the other fellow has a preference.

All these and more must the estimator know in order to maintain an efficiency of 100 per cent. in his department, and the basic facts of his knowledge can be rightly developed in one way only, and that is by starting at the beginning and working by successive stages from apprentice to estimator.

If industry, observation and efficiency are maintained in the preliminary work, they will reach their fruition by developing an estimator who is equal to any emergency that may arise.

Camp Supplies

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View 1.



View 2.

A New Swage The Best Yet United States Patent for Sale

This new swage invented by ourselves has all the good features of other swages plus some special patent features of its own. Those practical saw men who have used this swage pronounce it "The best yet."

View 1 illustrates a swage sawn in half to show its method of working. The tooth is swaged by a series of three rollers which cannot bind. The tooth is rolled out and not drawn.

A double thread is used on the locking lever. The first thread is rapid so that a slight movement of the lever allows the swage to travel on the saw without being lifted over each tooth. The second thread is slow so that the swage may be securely locked on the saw. The point at which the rapid thread ceases and the slow thread operates is governed by an automatic spring.

We offer for sale the United States Patent. If interested write us.

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OF THE TRADE.

Walnut and Pianos

A field which is drawing quite extensively on walnut for its raw material, and in fact that field which is probably realizing its possibilities in this direction more fully than any other line, is the piano trade. In this line of manufacture there is a steadily increasing quantity of walnut being used each year, but this is more particularly true in the middle western states than in the East, the reason probably being the fact that eastern concerns are naturally more conservative in their methods and more slow to take up with any changes in styles of raw materials, says Hardwood Record. A walnut man recently made the interesting observation, and his statement is unquestionably an absolute truth, that one of the biggest reasons for the continued absence of any quantities of walnut in fixtures and piano work (the condition which the walnut men are battling to overcome), is the widespread mis-information regarding the quantity of this stock available and the price for which it can be purchased. This walnut man said that furniture and piano factories will frequently send out inquiries for walnut stocks, and instead of taking the trouble of looking up firms who make a specialty of manufacturing this line of lumber or veneers, will write to the manufacturer of other hardwoods asking for quotations in connection with quotations on their usual line of manufacture. As a consequence these concerns, who probably have not a stick of walnut on their yards, and have no means of getting it other than through walnut specialists, write back quoting on someone else's stock at prices ranging at \$5 to \$10 above what it could be purchased for direct. The consequence is that the piano and furniture men get an entirely erroneous idea of stocks available and prevailing values. They are consequently discouraged when it comes to using any of this class of material.

Accurate information as to these two points is one of the first and paramount differences in primarily and adequately broadening the market for walnut. There is, and there will be for a long time to come, sufficient walnut to fill in the reasonable demand that might be created, and it is absolutely a fact that this stock can be had at prices which conform very fully to prices for other high-class cabinet woods. It is simply up to the walnut man to give the proper publicity to his stocks and to eradicate the vast amount of mis-information which has been pretty generally in the minds of those who would be possible purchasers; and this is now being done.

In the second place it is up to the walnut man to educate the furniture and piano man to the beautiful possibilities which are dominant in walnut to be brought out by the proper finishing methods.

Repairing Fine Checks in Veneer Work

By Rudolph Kilbourne

It occasionally happens that manufacturers of veneered goods run across a veneer that has a tendency to show up in fine checks after the goods are finished, and what to do with this defective stock in order to make it salable becomes a serious question. Frequently nothing more than the faintest outline of a check is visible until the goods are being rubbed, and then, almost before sufficient rubbing has been done to remove the gloss, these faint outlines develop into bold checks.

There are two or three ways in which these defects may be repaired, and the method to be followed must depend largely on the quality of work desired. If it is a medium class of work, the goods may be sanded and one or two coats of varnish applied; but if they are high-grade and a very fine finish is required, the better way is to rub these defective parts down in the usual way. For this purpose it would be better to use oil and pumice instead of water, because if the water goes through the check in the varnish into the check in the veneer, it will swell the latter and make the breach in the varnish much greater and more difficult to repair.

Goods that are rubbed down will not require so much varnish as will goods that are sanded, because the former makes a much smoother surface. But whichever way it is done, the main thing is to be sure and put on enough varnish to remove any danger of going through to the hard, dry varnish beneath during the second rubbing. When varnish gets to a certain stage of dryness it will not unite or "knit" with varnish freshly applied; and if we rub through the last varnish put on, into the under coats, it will look as though it had been scaled off.

After the goods have been rubbed down, take great care that all oil and pumice are thoroughly cleaned off and all lint dusted off. Examine the checks carefully, to see that none of the edges are rubbed light in color. It frequently happens that, where water has been used

for rubbing, and comes in contact with the wood, the stain is drawn out, and that part would show up light if not touched up before being varnished. For touching up, use the regular stain, but be careful and remove any that may get over the edge of the check onto the surface of the varnish. If any is left on the varnish it is liable to show darker than the rest, and much more liable to give it a bronze cast.

After all these things have been attended to, apply with a fine brush to the parts to be varnished a good coat of very thin unbleached shellac. Have this cut at the rate of about 1¼ lbs. gum to a gallon of spirits. Apply with as little brushing and as rapidly as possible, to avoid leaving brush marks. The spirits in the shellac will cut into the dry, hard varnish very rapidly, and there is great danger of the brush leaving ridges if brushed too much. When this happens considerable time will be required to sand them out. When the shellac is used very thin, just brushing enough to put it on is a good plan, leaving it to flow out itself. There is not much danger of laps showing as a result of so little brushing, owing to the shellac being so thin.

Goods fixed up this way should not be allowed to become too dry before they are again rubbed out, or the same trouble will be experienced over again, and the work repeated. If there is much of this class of goods on hand it would not be advisable to do up at one time more than is likely to be required in the immediate future. I do not mean by this that varnish, as a rule, should be rubbed before it is thoroughly dry. This is a case where a little compromise is necessary. These latter coats of varnish have not removed the cause of the defects, but have merely repaired the defects themselves, and so long as the cause remains there is liable to be the same trouble if conditions are favorable for it. The duty now is to guard against these conditions by rubbing the varnish before it has lost too much of its elasticity, or become seriously affected by the expansion and contraction of the broken fiber in the veneer, which is the cause of the trouble.—Veneers.

A Cruising and Engineering Department of Lumbering

The lumber industry has gone through many changes since the early days when it consisted largely of the cutting down of trees and the manufacturing of boards, planks, etc. The pioneers of lumbering in North America would be surprised at the great variety of activities coming under the head of lumbering as it is carried on to-day. An interesting example of the wide variety of work to which the lumber industry naturally leads is accorded by the case of the L. E. Campbell Lumber Company, Detroit, Mich. This company had its origin in the latter part of 1850 when Michigan was practically a wilderness, bountifully blessed with various classes of timber. The forerunner of the present company came from the east and began cutting oak and walnut in the Lower Peninsula, shipping the product to the eastern markets. Following the lumber industry in some of its important migrations, these people moved into Northern Michigan, to operate in the virgin pine belts adjacent to the shores of Lake Huron and they established, early in the sixties, the first sawmill of Campbellville, which grew subsequently into the city of Alpena, long famous as one of the principal pine centres of the United States.

After the depletion of the large timber in the late eighties, younger members of the firm turned their attention to the south and operated among the hardwoods and other timber for which that country is famous. At the same time other members engaged in the veneer business covering a wide field and making investigations of tropical timber in Mexico and the Latin American republics. Subsequently these operations led to the cutting of mahogany logs on the west coast of Africa and the shipment of large cargoes of mahogany from the port of Axim to Liverpool and to the American markets.

All these wide spread activities led to the members of the firm securing an exceptional acquaintance with the whole lumbering industry, and with timber values in many parts of the Globe. As a natural development, it soon came about that they were called upon to investigate and report upon timber in various countries, and in some instances their services were drawn upon to take charge of lumber operations which had been mismanaged, and which, after being put on a strong basis were turned back to the original owners, and successfully operated. All this work led to the cruising and estimating of timber tracts in practically all portions of the world. One investigation led to another until the services of the company were called upon in Chile and the Argentine, as well as in many sections of the far north, in Canada and in the Pacific Coast States.

The most important development in connection with the company and its work was the creation of a cruising department. This was a

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Run, Several Hundred Thousand Feet of Good Dry Mahog-
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natural result of the company's expansion and to-day they have gathered together a cruising department which includes some of the best talent in the United States for undertaking and carrying out the cruising of timber, map making, operation of companies and in short anything pertaining to the lumber industry.

An attractive booklet has been issued by the company which describes in detail the exact range of work done by this department. A copy of the booklet will be forwarded to anyone who is interested, and who makes enquiry of the company at 1113 Ford Building, Detroit, Mich.

Three Types of Business Management

Strenuous, Systematic and Efficient Types—Rule-of-Thumb Management a Liability, Never an Asset*

It is important for us to recognize in the very beginning of any consideration of the question of costs, that a cost system does not unfold itself as a logical consequence of starting a business with a book-keeping department. A cost department is an entirely different unit. A cost system is not based upon the pre-determined scheme of things which flow from one to another in an inevitable and logical sequence. A cost system is the reflection of a man's mind, of his manner of thought, of his education, of his sympathy, of his training and experience, of his ability to manage, to analyze, to synthesize, to co-ordinate, to harmonize, to grasp things in detail and in the large. We understand that cost keeping at its best is an efficient method of determining exactly what time, work, and material is put into the production of any marketable energy, commodity, or service.

Do not make the mistake of thinking that manufacturing is limited to things that you can weigh on scales or measure with a foot rule. The electric light company manufactures a product as well as the automobile manufacture. The railroad company manufactures a product as well as the sugar refinery. The banker manufactures a product as well as the hat manufacturer. The department store manufactures a product, and so does the doctor, the lawyer, and the advertising manager.

The mere fact that in some of these a definite standard of measurement has not been obtained, does not preclude the idea that their work can and must be measured and its value approximated. Therefore, no man should adopt the attitude that they can't be measured. Some people think that advertising can't be measured. This is not because it can't be measured—it is because their education, their experience has not progressed far enough to give them the ability to measure it. The savage seeing the lightning in the sky would probably find it impossible to imagine that the electric fluid could ever be measured, but it is being measured. The main purpose of any cost-keeping system is to find measures for many things that can be measured by the ordinary bookkeeping processes, or by the mere senses of careful foremen, and thereby arrive at standards of usefulness and value and determine relative costs of production for guidance in forming policies.

If a cost system is a reflection of a man's mind, or of the minds of a number of men, it becomes very important to find out what kind of men they are.

There are three fundamental types of men in the world. There is the Strenuous type, the Systematic type and the Efficient type. These types fall into divisions, determined by the methods they use and all of their mental and physical equipment. All these types are reflected in cost keeping systems. The strenuous man, for instance, is the hard working type. He may be called the "sweat" type. His philosophy in life is embodied in "DO IT NOW." He is a doer worker of muscular type. We have had thousands of them in our factories as managers. They are busy—busy-ness is business with them. They are the men who get down to the office at six o'clock in the morning and work until ten o'clock at night. They never think of the factory hygiene, of lighting, of plant planning, of functionalizing, of standards, of education. Their ideal is hard work. They take literally the proposition that man must gain his livelihood by the sweat of his brow. When everybody worked that way, of course, strenuousity was the order of the day. It didn't make any difference—the world was on a sweat basis. Then the man who was the most strenuous, made the most money in feeding a hungry market. It was a brute force—physical stamina that won. One unskilled laborer was so good as any other unskilled laborer. But when skill came into competition with the man at the bench; when brains, forethought, planning and thinking came into competition with the strenuous manager, then came the demand for protection, and the outcry against competition.

The purely strenuous type can be seen in a bookkeeper who works hard, who is loyal, but who fusses and fiddles over things, but the rule-of-thumb or strenuous man is the type that believes if he lowers his cost each month or each year, he has gained highest efficiency.

He maintains that his business is different from any other business. He thinks the only thing worth taking from anybody else is to

steal a patent, or to steal a man who has shown that he can do more than anybody else.

The rule-of-thumb man says "each man is different," that "you can't teach salesmen," that this man who is doing things so successfully has an unusual faculty possessed by nobody else.

His apprentices "learn by doing" (the good and the bad things); he hasn't any school of workmen (they already know). A school for teaching salesmanship would make him laugh—and yet he is buying his cash registers, his adding machines, his insurance policies and his loose-leaf devices, if he has any, from salesmen who have been taught in schools how to sell the produce to just such a man as he.

The rule-of-thumb man never joins business organizations except to be a good fellow—he never makes a research to find out new things—he calls it "high brow theory." You can't tell the rule-of-thumb man anything, because you can't tell any man anything that he doesn't know.

The rule-of-thumb farmer plants by the almanac and reaps by the grace of God.

The rule-of-thumb mechanic has learned his good and bad methods by the side of an older mechanic, who learned his good and bad methods from another. Each loses a certain amount of efficiency in the process of learning. He doesn't study trigonometry or geometry. He doesn't care anything about such "high-brow stuff," but he is a loyal member of his organization and talks against capitalists "who don't do anything."

The rule-of-thumb employer cares nothing for co-operation. He sees nothing but competition. The only kind of organization he wants to belong to is an anti-union organization. He is an anti-laborer; he believes that you have to use the big stick, that you have to drive men instead of lead them because, "Well, you see, that's the way it always has been done, and my father did it that way."

The rule-of-thumb banker, the rule-of-thumb retailer—all of them have ingrowing businesses because their education has never gone beyond the confines of their own particular experience.

They can imitate, but they can't adapt.

They don't really think about their business—they only think about the dollars and cents.

They don't think about men, but they think about machines.

Their costs are necessarily nothing but approximations, more or less distant, of an ideal set by the men who have worked under different conditions of a more or less distant past.

In such a plant you see "DO IT NOW" signs all over the place. In such places salaries are raised by the time clock and calendar. Such a manager has no methods of measuring men's efficiencies because he doesn't know what these efficiencies are.

His ideal of a cost system is a crude method by which the piece workers can be prevented from getting more than he thinks they are worth. He says no laborer is worth more than \$2.00 a day because that's all he has ever paid, and he is perfectly satisfied if a salesman increases his business 10 per cent. a year in his territory. If his competitor lowers prices, he wonders where his competitors "steal" the raw material. "How long can he continue to lose money?" It never occurred to him that a man can beat him at his own game and make a fortune in the process.

He doesn't analyze his business and its possibilities to find out the real reason for his success or failure. He hasn't time. He is "too busy doing things."

In the hiring of people, his ideal is to "try them out—see what they can do." The try and fail method is a gospel to him. He solemnly asserts that "you can't tell what any man is able to do." "That other concerns are foretelling and finding out what types of men are necessary for certain jobs, are pre-determining what men will fit the jobs and then getting the men to fit the jobs, is a joke to him.

Of course you can't tell him anything about it because he doesn't know anything about it.

He doesn't know anything about the idea because he has never seen it at work. If he did see it, he would probably dismiss it with—"The Employment Manager was better than usual," but as for finding law or principle in any course of action, he dismisses it with—"It is the man who is doing the work, and the man who is getting the results."

The rule-of-thumb manager prides himself upon "knowing his business." He never thinks of using outside counsel. If a man would suggest to this type of mind that there is a better way in which to grind a valve, his first question would be, "how many valves have you ground?" In other words, his attitude of mind is of the man looking in the mirror when he is looking for all the reason for success.

It is a type of mind of which we have had entirely too many, and which competition and the efficiency of skilled minds, applied to skilled work, is gradually forcing out of American business. These rule-of-thumb managers act as the priests of old, adopting a precedent as a sacred flame which has passed from hand to hand, from generation to generation, each keeping it inviolate, never changing it, until it be-

* By E. St. Elmo Lewis, advertising manager of the Burroughs Adding Machine Co.

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comes a sacred tradition before which youth, and skill and brains and power must bow in submission. The rule-of-thumb manager is always a liability and never an asset. He may be popular, he may have succeeded, he may be succeeding, but just as inevitably as the sun rises, his day is done.

Efficiency and Progression

How often we find a mechanic capable in efficiency, but handicapped in progress! How often have men in this condition pondered over their inability to get in a position where they are enabled to climb to higher rungs of the ladder in our industrial world! There are to be found in many plants instances where men have been filling the same position for years and years; have operated the same machine continuously through the best part of their working life. In all probability they have advanced a little in wages and have naturally accumulated more skill, yet they have remained on the same step of the ladder. Some have been contented to do this, while others have not, says A. S., in *The Woodworker*, Indianapolis.

Have there, in all the years they have put in there, been any vacancies wherein they might have taken a foothold on a higher step? Yes, the old foreman has quit and the firm has sent out and hired a new one. There are some plants where this is done differently and they promote one of their old men who is capable and efficient. Quite often this sending out for a new man has become necessary in order to give a general shaking up and replacing of men, with the thought that these changes mean more rapid progress to the business.

The question arises, is it wise or practical to change positions in order to progress? This question comes up from the fact that there is often found a man who seems not able to make the progress he is entitled to with the firm with which he is employed, and also because, on the other side of the argument, there are many men who flit around from job to job so frequently that they never attain any progress in their calling.

We can study both sides of this question and still not determine an answer satisfactory to all. Take the planing mills, for instance. There are undoubtedly many machine operators who are badly handicapped at times where they are employed; that is, they are held from making any progress. In some instances it may be hindrance in the limit of the work to be done, the concern small and the duties simple. In another plant it may be that there are other men ahead in the line, so that there is small chance to work up. Again, it sometimes develops that a man is not able to get recognition of his efficiency or the qualities he has developed until he quits, leaves his home city and casts his lot among strangers.

I recall a certain firm which in the past had several men to develop into such efficiency as to warrant them in changing positions. They should have been promoted by this firm, but were not, for seemingly foolish reasons. There is probably a fundamental reason for this, so let us try and see what it is.

When one starts in young and ignorant of the work in any institution, he has it to learn, beginning at the simpler duties. Quite often he will make errors, but give him time to learn all his duties and he may qualify for a position much higher than the one assigned him. Very often, and too often in fact, the foreman or manager continues to retain a mental impression of the errors and mistakes of this man, and even though he may work diligently for years in this same place after he has acquired skill and efficiency, it seems impossible for him to eliminate the impression retained of his early errors.

Suppose this man goes away to other localities and tries to obtain employment among strangers. They know absolutely nothing about the errors of his earlier days; they take him at his word as to his ability and he is given a trial. His entry is clean and he has a chance to show this ability; he is measured by the results he produces and not handicapped by the mental impressions of any one. He stays in his new place until he has acquired greater efficiency, then finds himself handicapped. His employers remember him as he was sized up on entering their service, and this impression is so stamped upon their minds that they cannot or will not see farther. So this man, desiring to progress, must again cast himself among strangers.

These conditions are ever present and around us in all the walks of life, but we do not all take notice unless our attention is attracted. Now look at the other side of the question. There are men in many institutions who have started at the lowest rung of the ladder and successfully attained the highest places, without making a change. There are men who, when mere boys, started in a planing mill as helpers and have wound up by being the owners of the mill.

The men who are enabled to climb to the top of the ladder in the one institution present a shining example in comparison to those who flit from one position to another. We find some men who have traits about them that enable them to attain distinction almost anywhere they go. Again, there are some who attain distinction in certain plants

because those in charge take pains to bring out their best qualities. Look at the many things which play important parts in the mechanic's development; quite often it is hard to pick out which part, among them all, deserves the credit for his progress. Take a man who has worked steadily for a long number of years with a firm and no recognition of his ability is given by his employers. He more than likely becomes discouraged and begins to look for new fields, so as to get out of the rut he seems to be in and find a market for his acquired skill.

We find cases where a man has acquired skill at his duties, but is never again given a chance of promotion because his employer, knowing that he is a good man at his post, will not put a new man there and allow the old one to advance to a higher level. So naturally he is left there and a stranger comes in and takes the higher position that was justly deserved by the old employee. There are many men who get into this rut and fall behind, who would be justified in striking out and leaving behind all old connections. It is a question that they must ponder over and answer for themselves according to their judgment.

I have in mind the case of a man who worked steadily for a firm for eighteen years and had become highly efficient at his duties. He was entirely and absolutely capable of filling the position of foreman, which was open several times during his career at this place, but I do not suppose his employers at any time considered him capable of discharging these duties, and would send to other cities and get a new foreman. This man had gotten into a rut that looked hopeless, but one day a firm heard of him and wired him, asking if he would consider joining them as manager of their business. He became skeptical, thinking that probably he could not make good, as it was such a surprise to think that a chance had come for him to progress and his efficiency had been noted by others rather than his old employers. He accepted this new position and in the years since has been progressing right along, and is thankful that he left the rut at the knock of opportunity.

Forestry Convention, Halifax Sept. 1-4, 1914

Arrangements are well under way for the Sixteenth Annual Convention of the Canadian Forestry Association which is to be held at Halifax, N.S., September 1-4, 1914. The President, Mr. William Power, M.P., the well-known lumberman, of Quebec, and the Vice-President, Mr. F. C. Whitman, also a well-known lumberman, of Annapolis, Nova Scotia, are both taking a keen personal interest in the meeting, and under their direction the Secretary, Mr. James Lawler, of Ottawa, will visit Nova Scotia in the latter part of June to hold a series of preparatory meetings in the different counties.

While the different features of forest protection in Canada will be discussed, special attention will be directed to condition in Nova Scotia and the Maritime Provinces. Timberland in Nova Scotia is owned nearly altogether in fee simple and about half of it in comparatively small blocks of from 200 to 1,000 acres. The other half is owned in comparatively large blocks. A great deal of the country has been cut over and the chief point to be discussed is how to protect and handle these cut-over areas which are not fit for farming, so as to get the best results.

It is expected that the Federal Government and all the provincial governments from Ontario eastward will be represented, and already a number of lumbermen and timber owners in different parts of Canada have signified their intention of attending. Particulars may be had by addressing the secretary.

The Inventor of the Peavey Cant Dog

The Peavey Mfg. Company, Brewer, Me., in a recent letter to the Canada Lumberman, give some interesting information regarding the invention of the "Peavey Cant Dog," a tool which is practically universally used in connection with logging operations. The Peavey Cant Dog, they tell us, was invented by Joseph Peavey in Upper Stillwater, in 1858, or very near that time. A man named Wm. Heald, who had charge of the driving of logs on the Stillwater branch of the Penobscot River, used the first Cant Dog made and his family still have it in their possession. "We have tried to get this Cant Dog, but they will not part with it," says the Peavey Mfg. Company. Mr. Joseph Peavey also invented a number of other useful contrivances, among them the hay press and the stump machine and it is claimed that he also made the first wooden screw, 8-in. in diameter, out of beech wood. This screw was used in cider mills and showed very little deterioration after as much as fifty years of use. Mr. Joseph Peavey died at the age of 76.

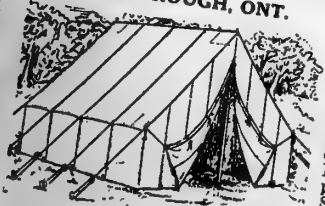
The Clyde Forks Lumber Company, Clyde Forks, Ont., under date of May 28th, report that their drive is finished and they have all their logs at their mill. We have a better cut than we have had for a number of years.

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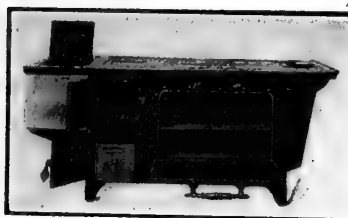
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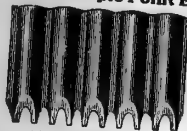
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EDGINGS

Ontario

The East End stave mills belonging to Jas Dogue, at Strathroy, Ont., were recently destroyed by fire at a loss of \$10,000 which was covered by insurance.

Seaman & Sons Company, Limited, Sauble Falls, Ont., have been incorporated with capital stock of \$70,000, to manufacture and deal in lumber, brick and building material.

The planing mill belonging to J. & C. Low, contractors, 262 Catharine street, Ottawa, Ont., was recently destroyed by fire, the loss amounting to about \$60,000. The damage included about \$10,000 worth of machinery, all of which was electrically driven.

Edward Clark & Son Stair Building Toronto, have purchased all the birch, black ash and red oak which the Fassett Lumber Company, Limited, Fassett, P.Q., will turn out this season, amounting to about 3,000,000 feet.

John Foxton's sawmill at Kingston, Ont., was blown up by dynamite on June 1st. Mr. Foxton believes that the destruction was caused by men who had a grudge against him for having obtained a grant in connection with the erection of his mill.

A serious fire broke out at Powasson, Ont., early on the morning of June 7th and resulted in the destruction of 25 buildings. The damage also included 1,000,000 feet of lumber owned by the Trout Creek Lumber Company. Mr. F. A. Bachler, of the Trout Creek Lumber Company, reports that his loss amounts to \$24,000 on which there is insurance of \$12,000.

Eastern Canada

A destructive bush fire which occurred to the east of Oxford Junction, N.S., recently destroyed the mill belonging to Colin McKenzie, at Victoria, N.S. The loss also included 300,000 feet of deals belonging to Wm. Van. Buskirk.

Morrison Bros., sawmill at Karsdale, Lower Granville, N.S., was recently destroyed by a boiler explosion and Mr. Geo. Morrison, the junior member of the firm was seriously injured. It is expected, however, that he will make a steady and satisfactory recovery.

The St. Maurice Lumber Company's mills at La Tuque, P.Q., started their sawing operations on May 11th. With the improved facilities and increased mill equipment which they have installed the company expect to have a much larger production in 1914-15 than ever before.

Operations have been resumed at the Nepisiguit mill of the Bathurst Lumber Company. Many radical changes and improvements have been made in the equipment of this mill and it is now reported to be the most up-to-date of its kind in New Brunswick. Mill No. 1, operated by the Bathurst Lumber Company is employing a full crew of men and the company's new planing mill is rapidly nearing completion.

Another large contract for timber for Government work in eastern Canada is to be placed with British Columbia mills. The amount is 5,500,000 feet, to be used in the construction of the drydock at Port Levis, Que., near Montreal. The contract for the dock was awarded to M. P. and J. T. Davis, who placed the lumber order with Mason, Gordon & Company, Montreal, which latter firm will let the contract to British Columbia mills through its Vancouver office. The lumber will be shipped via Panama.

The lumber mills belonging to R. & T. Ritchie, Aylmer, P.Q., were recently destroyed by fire. The loss amounted to \$75,000 and the insurance was about \$50,000. Mr. Thos. Ritchie is reported as saying that the company will in all probability rebuild the mill. The fire commenced in the shingle mill and spread rapidly to the main body of the sawmill. In addition to the mill, about 50,000 feet of manufactured lumber was destroyed. The destruction of the mill will throw about 125 men out of employment during the summer months. This is the second time that the firm has suffered a heavy loss by fire. In 1911 their lumber yards on the outskirts of Aylmer were destroyed involving a loss of about \$250,000.

Mr. B. L. Moore, Moore's Mills, N.B., whose plant was recently destroyed by fire, reports that he will probably rebuild on somewhat different lines. Formerly his plant was chiefly for the manufacture of wagons and axles. He intends now to go into the manufacture of short lumber, staves, shingles, laths, etc., and to give up the wagon manufacturing end. His new plant will include a rotary saw for long lumber and a grist mill. Mr. Moore also reports that his dams will have to be rebuilt before anything else can be done, so that he will probably not make a start upon erecting the new plant until about August. He will be in the market for machinery.

Western Canada

Three new shingle machines have been installed in the plant of the Port Hammond Lumber Company, Port Hammond, B.C. The new owners of the plant, Messrs. Hartnell & Son are devoting their attention to a general repair

and overhauling of the plant. New booming grounds will be constructed above the present site and storage ground for logs will probably be provided across the river.

The Royal City Lumber & Shingle Company recently lost their shingle mill at New Westminster, B.C., by fire. The loss amounted to \$15,000. The company intend to rebuild. The boiler house and dry kiln were not injured.

P. W. Fauvel, Burnaby, B.C., has awarded a contract for the erection of a shingle mill with a daily capacity of 100,000 shingles. The mill is to be erected at Burnaby Lake and the general contractor is T. P. Morrison, Burnaby, B.C.

The Acorn Lumber Company's mill, Edmonds, B.C., formerly owned by Mr. K. Racey, of Vancouver, has been sold to Mr. M. Irving, formerly in the retail lumber business. Plans are being made for a new dry kiln and additions to the mill.

Georgia Logging Company, of Victoria, a subsidiary company of the Cowichan Lumber Company, Limited, is not operating this season, on account of market conditions. The head office of this concern is at Bobcaygeon, Ontario. Wm. Gidley is the manager of the British Columbia interests.

The Marcum Lumber Company, which has taken over the mill on the Great Northern, south of New Westminster, operated by the Mosher Lumber Company, has for its officers: President, Alexander Cummings; managing director, R. H. Marlatt; secretary-treasurer, J. M. Cummings. The president is a native of Scotland, who after some experience in the West Indies came to Canada, and after being connected with a plant in Vancouver organized the Marcum Lumber Company.

The McCormack & Dailey Lumber Company, which was recently organized at Seattle with a capital of \$50,000, has for its principals men well known in the industry in British Columbia. The president is J. D. McCormack, secretary of the Canadian Western Lumber Company, and who was head of the Columbia River Lumber Company before that plant was taken over by the Canadian Western. The secretary and treasurer is R. A. Dailey, formerly sales manager for the Columbia River Lumber Company at Golden. The sales manager is William Bristow, formerly with Lester W. David & Company, Vancouver.

A report from Prince Albert, Sask., states that the Prince Albert Lumber Company have bought out the Big River Lumber Company and will hereafter operate their plant at Big River and the limits in connection therewith. The sawmill and planing mill of the Big River Lumber Company were destroyed by fire on June 11th, 1913, and the company commenced to re-erect them last fall, expecting to have the planing mill ready in the near future and the sawmill a little later on. The Prince Albert Lumber Company, who are now in possession, anticipate that the planing mill will be completed by July 1st and the sawmill by August 1st. The Big River plant will be closely allied with the other plants operated by the company, but will have a separate organization known as the Ladder Lake Lumber Company Limited notice of whose incorporation was published recently in the Canada Lumberman. Sufficient logs are already cut and ready to keep the new plant operating for almost a year and there is sawn lumber on hand in large quantities ready for the opening of the planing mill. The purchase of this plant also included the purchase of the Big River Lumber Company's timber limits.

Another Forest Protection Association

With a view to prevent forest fires in the Laurentians it is proposed to form an association which will take in hand this important work. At a meeting held in Montreal on June 4th, the following committee to consider the matter was formed: R. A. Outhet, chairman; F. Whittall, secretary; A. Ayres, J. R. Innes Allen (representing the C. P. R.), Guy Tombs (representing the C. N. R.), and Col. Starke. The committee has been asked to draw up a plan for the formation of a society. Mr. James Lawler, of the Canadian Forestry Association, and Mr. Ellwood Wilson, of the Laurentide Company, and vice-president of the St. Maurice Fire Protection Association, were speakers at the meeting, and outlined the methods which are adopted to guard the forests from damage by fire.

New Canada Machinery Bulletins

The Canada Machinery Corporation, Limited, Galt, Ont., have issued a number of new bulletins dealing with some of the principal lines of their product. The new bulletins are to supersede former bulletin and are for insertion in the Canada Machinery Corporation's woodworking machinery catalogue. The new bulletins include the following:—No. 123, Knife Grinder; No. 123, Knife Balancing Machine; No. 505 and No. 507, Mortisers; No. 708, Band Re-saw; No. 817, Box Board Matcher, with continuous feed; No. 903, Three Spindle Vertical Car Borer; No. 905, Three Spindle Vertical Boring Machine; No. 911, Horizontal Boring Machine, with Universal Table; No. 919, Post Borer. These bulletins are attractively published, each of them being illustrated with a good half tone picture of the machine described. The descriptions accompanying the illustrations are brief and practical and give one an excellent idea of the capabilities of each machine.

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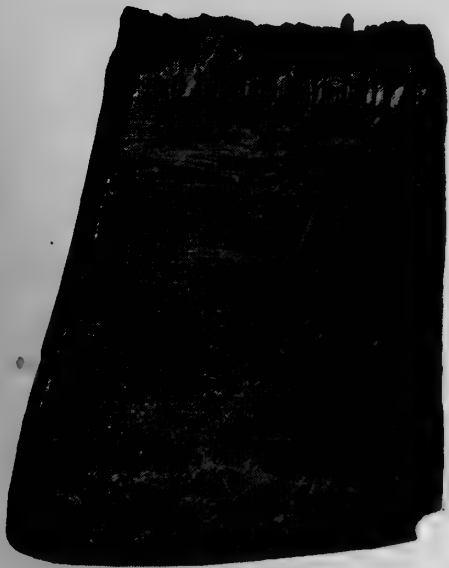
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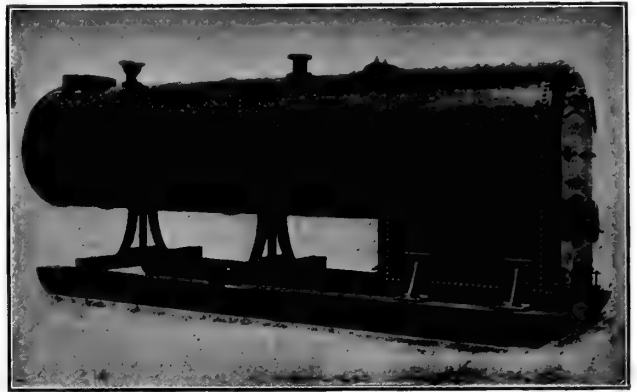
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Cafisch Bros.	19		Mason, Gordon & Co.	15	
Cameron & Company	12		McGibbon Lumber Co.	12	
Campbell-MacLaurin Lum. Co.	56		McKinnon Chain Co.	1	
Canada Metal Company			McLaren Belting Co., J. C.	80	
Canadian Locomotive Co.	75		McLennan Lumber Co., Ltd.	15	
Canada Wood Specialty Co. Ltd.	10		Mereen-Johnston Machine Co.	74	
Can. Mach. Corporation, Ltd.	70		Montreal Engineering Co.	43	
Canadian Fairbanks Co., Ltd.	1		Montreal Lumber Co.	10	
Can. H. W. Johns-Manville Co.			Morris Crane & Hoist Co., Her- bert	17	
Can. Linderman Company			Montreal Locomotive Works, Ltd.	74	
Canadian Office & School Furni- ture Company	43		Morin & Co., Dr. Ed.	55	
Can. Western Lumber Co.			Morgan Machine Co.	71	
Cane Company, J. G.	4		Munson-Whitaker Co.	11	
Cant & Kemp	11		N		
Capital Wire Cloth Co.	17		National Mfg. Company	55	
Carborundum Company	65		Newman, John P.	10	
Casey-Shaw Lumber Co.	8		New Ontario Colonization Co.		
Chisholm Milling Co.	55		Nicholson File Co.	1	
Christy-Moir Company	10		O		
Cleveland-Sarnia Saw Mills Co.	45		Oliver Lumber Co.	13	
Climax Mfg. Company	75		P		
Cling-Surface Company	68		Parry Sound Lumber Co., Ltd.	17	
Clyde Iron Works	71		Partington Pulp & Paper Co., Ed.	9	
Coghlin Co., B. J.	1		Patent Selling & Mfg. Agency	69	
D			Payette & Company, P.	72	
Dalhousie Lumber Co.	9		Philadelphia Textile Machinery Company	75	
Dawkins Lumber Co., W. H.	18		Perrin & Company, Wm. R.	17	
Dixon, F. M.	21		Pink & Company	25	
Dixon Crucible Co., Jos.	69		Q		
Diver, J. M.	6		Quebec & St. Maurice Industrial Company		
Defiance Machine Works	25		Quincy Adams Lumber Co.		
Disston & Sons, Henry	57		R		
Dom. Mahogany & Veneer Co.	51		Radcliff Saw Company		
E			Rat Portage Lumber Co., Ltd.		
Dom. Timber Regulations	76		Reed & Co., Geo. W.		
Donogh & Co., John	13		Reddaway & Co., F.	Front cover	
Dudley, A. N.	13		Rideau Lumber Co., Ltd.		
Dwyer Company, W. H.	55		Rimouski Industrial Co.	10	
F			Ritter Lumber Co., W. M.	18	
Fassett Lumber Co., Ltd.	14		River Ouelle Pulp & Paper Co.	14	
Farnworth & Jardine	11		Rogers & Co., Samuel C.	69	
Federal Engineering Co., Ltd.	57		Russel Bros.	12	
Fesserton Timber Co.	8		Russell Wheel & Foundry Co.	21	
Fenderson & Co., Inc., John	47		Rutherford & Sons, Wm.	64	
Forest Mills of B. C.	16		Ryther & Pringle	60	
Fraser Bryson Lum. Co., Ltd.	6		S		
Fraser Limited	9		Saw Mill Owners Sales Co.	15	
Frost, A. C.	56		Sessenwein Bros.	55	
G			Sewall, Jas. W.	11	
Galt Knife Works	21		Sheldons Limited	71	
Garrett Lumber Co.	4		Shimer & Sons, Samuel J.	77	
Gartshore, John J.	56		Shurly-Dietrich Company		
Georgian Bay Shook Mills	2		Siemen Bros. Ltd.	10	
Georgian Bay Lumber Co., Ltd.	6		Simonds Canada Saw Co., Ltd.	26	
Gerlach, Peter	65		Smart-Turner Mach Co., Ltd.	1	
Gillespie, James	10		Smart-Woods Limited	53	
Gillies Bros., Ltd.	6		Smith, N.	55	
Glengarry Lumber Co.	43		Smith Company, R. H.	25	
Goodhue & Co., J. L.	63		Snowball, J. B.	9	
Goodyear Tire & Rubber Co.	23		Spears & Lauder	13	
Gordon & Co., Geo.	3		Spencer, C. A.	8	
Graves, Bigwood Co.	11		Standard Chain Company	68	
Graton & Knight Mfg. Co.	59		Stearns Salt and Lumber Co.	18	
Greening Wire Co., B.	24		Steel Co. of Canada	55	
Grand Rapids Veneer Works			St. Gabriel Lumber Co.	15	
Gurney Foundry Co.	22		Superior Manufacturing Co.	10	
Gutta Percha & Rubber Limited.			T		
H			Tessier, Alphonse	11	
Haeberle Lumber Co.	10		Thomas, Ed.	11	
Hall, Adam			Thurston-Flavelle Lumber Co.		
Hamilton Co., Ltd., Wm.	68		Timberland Lumber Co.	16	
Hardinge Bros.	10		Timms, Phillips & Co.	16	
Harrington Lumber Co., Frank H.	13		Toronto Blower Co.	80	
Hay, Peter			Turner & Sons, J. J.	55	
Heaps & Co., Ltd., E. H.	69		V		
Heisler Locomotive Works	75		Victoria Harbor Lumber Co.	12	
Heyser Lumber Company	19		W		
Hobart & Company	11		Waterous Engine Works Co., Ltd.	79	
Hocken Lumber Company	5		Watson & Todd	6	
Hoe & Son, R.			Webb Lumber Company		
Hoffman Bros. Co.	18		Webster & Bro. Ltd., James	11	
Hoyt Metal Company	80		West & Peachy	65	
Huther Bros. Saw Mfg. Co., Inc.	69		Wickes Bros.	71	
I			Wilson Bros.	62	
Inglis Company, John			Wilson Lumber Co.	11	
J			Wistar, Underhill & Nixon	18	
K			Wuichet, Louis	12	
L			Y		
M			Young Company, W. F.		
N			Z		
O			AA		
P			BB		
Q			CC		
R			DD		
S			EE		
T			FF		
U			GG		
V			HH		
W			II		
X			JJ		
Y			KK		
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AA			MM		
BB			NN		
CC			OO		
DD			PP		
EE			QQ		
FF			RR		
GG			SS		
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II			UU		
JJ			VV		
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MM			YY		
NN			ZZ		
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QQ			CCC		
RR			DDD		
SS			EEE		
TT			FFF		
UU			GGG		
VV			HHH		
WW			III		
XX			JJJ		
YY			KKK		
ZZ			LLL		
AAA			MMM		
BBB			NNN		
CCC			OOO		
DDD			PPP		
EEE			QQQ		
FFF			RRR		
GGG			SSS		
HHH			TTT		
III			UUU		
JJJ			VVV		
KKK			WWW		
LLL			XXX		
MMM			YYY		
NNN			ZZZ		
OOO			AAA		
PPP			BBB		
QQQ			CCC		
RRR			DDD		
SSS			EEE		
TTT			FFF		
UUU			GGG		
VVV			HHH		
WWW			III		
XXX			JJJ		
YYY			KKK		
ZZZ			LLL		

"Wilson Bros." Flooring and Trim

"Wilson Bros." stamped on every piece of this flooring stands for Quality. Look for the name. Hardwood and Pine. **Interior Finish of All Kinds.** Also Hardwood Veneer Doors to detail. We are equipped to fill large or small orders on short notice. Write us for prices.

Wilson Bros., Limited - Collingwood, Ont.



When You Overhaul Your Mill

THERE are wet places in every saw and pulp mill where nothing but the highest class belting can "make good." It is for these wet places that we recommend what most mill-men swear by—our

"ACME WATERPROOF" BELT

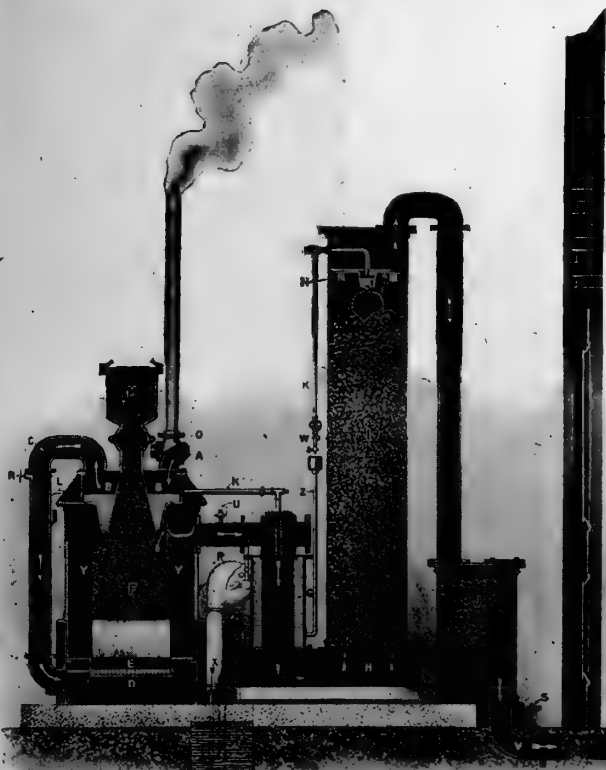
This belt is especially made for a rough and trying service. It has less stretch than any other belt by 15 to 25 per cent.

When you are overhauling try a Goodhue "Acme Waterproof" belt. Other Goodhue belts are "Extra" and "Standard."

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J. L. Goodhue & Company, Limited
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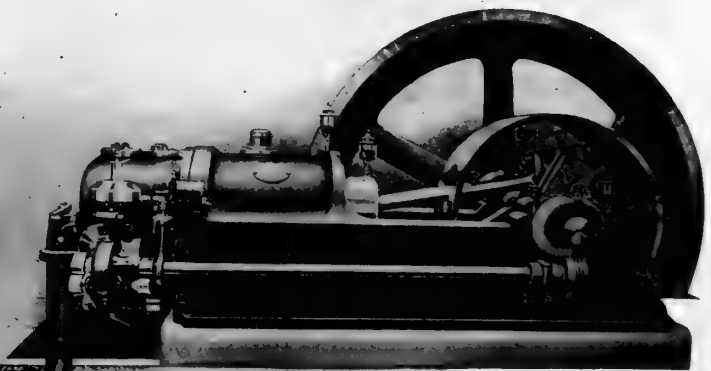
The Ideal Drive For Out of the Way Places



SECTIONAL VIEW

Suction Gas Producers for Charcoal.

High Class Gas Engines that are Absolutely Reliable.



Horizontal up to 180 H. P.

GEORGE ANDERSON & CO. OF CANADA, LTD., 617 Quebec Bank Bldg., MONTREAL

Rutherford's Stock Millwork



KLIMAX

If it's made of wood we can supply it. Our line of stock millwork embraces an immense variety of patterns in doors, newels, mouldings and other trim. Buy from our stock catalogue and you can save money and be sure of prompt shipment.

We are also equipped to cater for special detail work and keep a large plant in operation for this purpose.

The stocks we carry will always be found right up to the minute, and prices will be lower than obtainable elsewhere.

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***The Wm. Rutherford & Sons
Company, Limited
Montreal***



THE PETER GERLACH CO.
MANUFACTURERS
AND BUILDERS OF

SAWS
CIRCULAR AND CYLINDER

MACHINERY
STAVE HEADING AND BARREL

TOOLS
SAW AND LOGGING

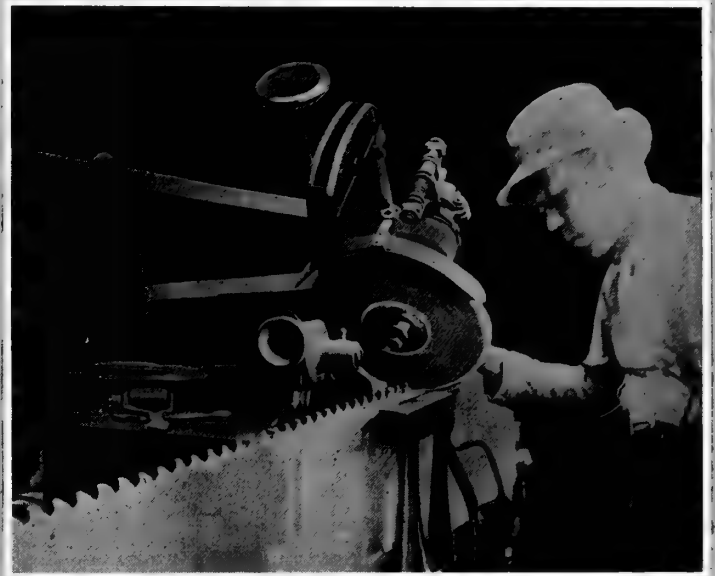
For the Manufacture of the Following

STAVES	HEADING
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COOPERAGE	WOODEN WARE
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CANDY PAIS	FISH KITS
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COMPLETE PLANTS
FOR THE MANUFACTURE OF

BARRELS, KEGS, STAVES AND HEADING
OUR SPECIALTY.

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ADDRESS
THE PETER GERLACH CO. CLEVELAND, O. U.S.A.

**Gumming Seven Twenty-Four
Foot Saws a Day and the Wheel
Has Not Glazed or Burned After
Seven Months Use**

Aloxite Saw Gumming Wheels

Are making such records as this
—giving such real saw-gum-
ming results. They cut fast, and
clean—hold their shape—show
long life, and they cut cool with-
out case-hardening the saw.

Let a Trial Wheel show you.

THE CARBORUNDUM COMPANY

PLANTS:

Niagara Falls, N. Y. Manchester, Eng.
Reisholz Düsseldorf, Ger.

STORES:

New York Chicago Boston Cleveland
Philadelphia Cincinnati Milwaukee
Grand Rapids



**Not altogether what we
say but what users say**

"We have used the Alligator or Warping Tug man-
ufactured by you for the last 7 or 8 years, and con-
sider them indispensable to lumbermen on waters of
French River or similar streams."

Will move a bag containing 60,000 logs,
in calm weather, 90,000 in a head wind.

West & Peachey - Simcoe, Ont.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	\$55 00	57 00
1½ inch No. 1 cuts and better	64 00	68 00
2-in. No. 1 cuts and better	67 00	72 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	56 00	60 00
4/4 No. 1 cuts	45 00	48 00
5/4 and 6/4 No. 1 cuts	52 00	55 00
8/4 No. 1 cuts	36 00	38 00
4/4 No. 2 cuts	42 00	45 00
5/4 and 6/4 No. 2 cuts	45 00	48 00
8/4 No. 2 cuts	28 00	30 00
4/4 No. 3 cuts	32 00	35 00
5/4 and 6/4 No. 3 cuts	33 00	36 00
8/4 No. 3 cuts	40 00	45 00
1-in. Good Shorts	25 00	28 00
1 x 4 and 5 com. and dressing	27 00	29 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	32 00	34 00
1 x 10 common and dressing	34 00	36 00
1 x 10 and 12 mill cull stocks	24 50	26 50
1-in. mill cull sidings	26 00	28 00
5/4 and 6/4 x 4 m.r., m.c. out.	26 00	28 00
5/4 and 6/4 x 5 m.r., m.c. out.	26 00	28 00
5/4 and 6/4 x 6 m.r., m.c. out.	26 00	28 00
5/4 and 6/4 x 8 m.r., m.c. out.	33 00	35 00
5/4 and 6/4 x 10 m.r., m.c. out.	34 00	36 00
5/4 and 6/4 x 12 m.r., m.c. out.	26 00	28 00
2 x 10 common	28 00	30 00
2 and 3 x 12 common	23 50	25 50
1 x 8 box and common	25 00	27 00
1 x 10 inch box and common	25 00	27 00
1 x 12 inch box and common	25 00	27 00
1-in. mill run sidings	22 00	24 00
1-in. mill run shorts	22 00	24 00
1-in. mill run Norway	25 00	27 00
2-in. mill run Norway	30 00	32 00
Norway, c. and cf. 1-in.	33 00	35 00
Norway, c. and cf. 1½-in.	33 00	35 00
Norway, c. and cf. 2-in.	19 00	21 00
Spruce mill culls	20 00	22 00
Hemlock No. 1:		
1x4 and 5-in. x 9 to 16 ft.	22 00	24 00
1 x 6-in. x 9 to 16 ft.	22 00	24 00
1 x 8-in. x 9 to 16 ft.	24 00	26 00
1 x 10 and 12-in. x 9 to 16 ft.	22 00	24 00
1 x 7, 9 and 11-in. x 9 to 16 ft.	17 50	19 50
1-in. No. 2, 6-ft. to 16-ft.	23 50	25 50
2 x 4 to 12, 10 and 16 ft.	22 50	24 50
2 x 4 to 12-in., 12 and 14 ft.	25 00	27 00
2x4 to 12-in., 18 ft.	27 00	29 00
2 x 4 to 12-in., 20 ft.	26 00	28 00
2 x 4 to 12-in., 22 ft.	24 00	26 00
2 x 4 to 12-in., 18 ft.	24 00	26 00
2 x 4 to 12-in., 24 ft.	30 00	32 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	18 00	20 00
Clear in B. C. cedar, kiln dried.	50 00	
Douglas Fir		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	32 50	
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	33 00	
6x14, 8x14, 12x18, 18x20, up to 32 ft.	33 50	
6x16, 8x16, 10x18, 12x20, 14x20, 16x20, up to 32 ft.	34 00	
10x20, up to 32 ft.	34 50	
6x18, 8x18, up to 32 ft.	35 00	
6x20, 8x20, up to 32 ft.	36 00	
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., \$1; 41 to 45 ft., \$3; 46 to 50 ft., \$5; 51 to 55 ft., \$7; 56 to 60 ft., \$9; 61 to 65 ft., \$12.50; 66 to 70 ft., \$15; 71 to 75 ft., \$18; 76 to 80 ft., \$22.		
Fir flooring, edge grain	44 50	
No. 1 and 2 clear 1-in. Fir rough	45 00	
No. 1 and 2 clear 1½, 1½ and 2-in. Fir rough	47 00	
1½-in. No. 1 4-ft. pine lath	4 50	
1½-in. No. 2 4-ft. lath	4 20	
1½-in. 32-in. pine	1 60	
1½-in. No. 1 4-ft. hemlock lath	3 75	
1½-in. mill run hemlock lath	3 50	
X pine or cedar shingles	1 05	
XX pine or cedar shingles	2 25	
XXX pine or cedar shingles	3 20	
XX B. C. cedar shingles	2 35	
XXX 6 butts to 2-in.	3 20	
XXXX 6 to 23-16-in.	3 40	
XXXXX	3 70	

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1, com. and bet., 4/4	33 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4	35 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	32 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	34 00
Soft elm, No. 2 and 3, common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4	55 00
Rock elm, No. 2 com. and bet. 6/4 and	

8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	28 00
Soft maple, 6/4 & 8/4, 1sts and 2nds	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/4	30 00
Hard maple, 12/4, & 16/4, 1sts and 2nds	46 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	70 00
Red oak, plain 1st and 2nds, 4/4	62 50
Red oak, plain 1sts and 2nds, 12/4	
and 16/4	75 00
White oak, plain, 1st and 2nds, 4/4	62 50
White oak, plain, 1sts and 2nds, 1½	
and 2-in.	70 00
White oak, plain, 1sts and 2nds, 12/4	
and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	65 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	\$52 00	54 00
1½-in. & 1½-in. x 8-in. & up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. & up	40 00	42 00
Pine good strips:		
1-in.	40 00	42 00
1½-in. and 1½-in.	52 00	54 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	42 00	44 00
1-in. x 4-in. to 6-in.	32 00	35 00
1½-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	26 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1½, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. and bet., shorts, 1 x 6	21 00	22 00
Pine, s.c. shorts, 6'-11' 1"x10"	24 00	25 00
Pine, box boards:		
1" x 4" and up, 6'-11'	18 00	19 00
1"x3" to 6", 12'-16"	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	16 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16"	18 00	20 00
1"x9"-10" and up, 12'-16"	22 00	24 00
1½"x7"-8-9" and up, 12'-16"	22 00	24 00
1½"x10" and up, 12'-16"	22 00	24 00
1½" & 2"x12" and up, 12'-16"	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	
Red pine mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

White Pine—In the Raft

First class Ottawa waney, 18-in. average, according to lineal	65	70
Oak—Michigan and Ohio		
By the dram, according to average and quality	60	70
Elm		
By the dram, according to average and quality, 40 to 45 feet	75	80

By the dram, according to average and quality, 30 to 35 feet

50	60
Ash	
13 inches and up, according to average and quality, per cu. ft.	25
Average 16 inch	30

Birch

14 inch, per cu. ft.	20	23
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	\$20 00	21 00
Oddments	17 00	18 00
Boards, 1 and 2 in.	16 00	18 00

Birch Planks

1 to 4 in.	16 00	18 00
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SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	\$54 00
1 in., 8 in. and up wide	62 00
1½ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	55 00
6/4 x 8 and up No. 1 and better	65 00
8/4 x 8 and up No. 1 and better	65 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	42 00
1½ in., 8-in. and up wide	55 00
1½ in., 8-in. and up wide	57 00
2 in., 8-in. and up wide	60 00
2½ and 3 and 8-in. and up wide	75 00
4 in., 8-in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	81 00
1½ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	47 00
2½, 3 and 4 in., 6-in. and up wide	62 00
	65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1½ and 1½ in., 6-in. and up wide	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00
	48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 18 in. and up	34 00
1½, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	81 00	45 00
1½, 1½ and 2-in.	86 00	45 00
2½ and 3-in.	45 00	
4 inch	50 00	

No. 2 Barn

1 inch	28 00	33 00
1½, 1½ and 2-in.	30 00	36 00
2½ and 3-in.	38 00	

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1½, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1½, 1½, 2-in.	22 00	25 00
No. 2, 1½, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.	19 00
1, 1½, 1½ and 2-in.	20 00
No. 2	17 00
	18 00

Lath

Lath	
No. 1, 32-in. pine	1 75
No. 2, 48-in. pine	4 25
No. 1, 48-in. pine	4 75
No. 3, 48-in. pine	3 75

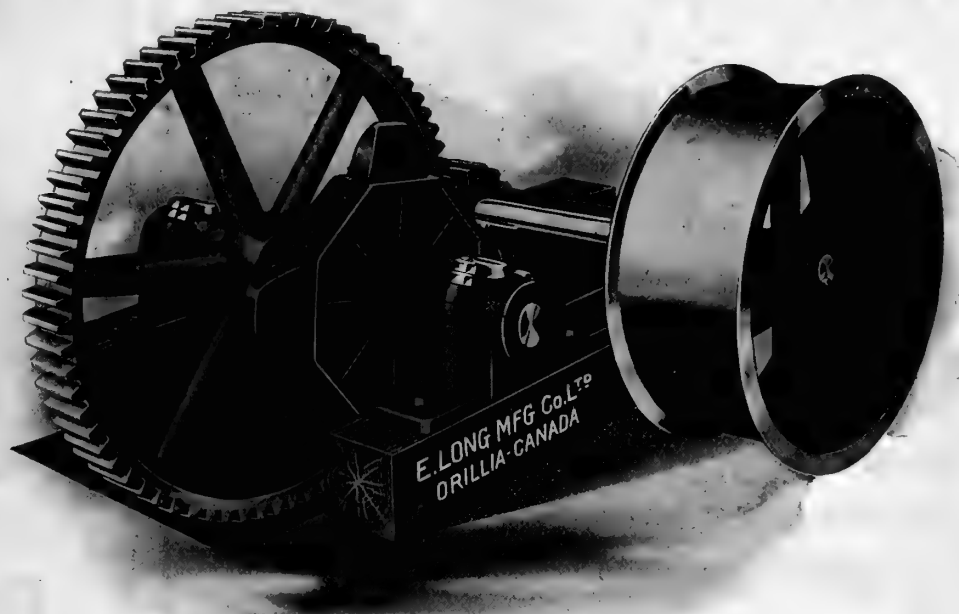
The Mark*of Quality*

EVERY DEVICE

for the economical production of lumber can be had in a size, and at a price, to suit mills of most moderate capacity.

Such is our Single Geared Log Jack here shown. Simple — Powerful — it is worth many times the cost.

Catalogs for the asking. A post card will do.



The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver

Gorman, Clancey & Grindley, Limited, Calgary and Edmonton

Represented by :

Stuart Machinery Co., Ltd., Winnipeg

Williams & Wilson Ltd., Montreal



See additional Ad on page 78

CURRENT LUMBER PRICES—Continued

No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE			
1s & 2s	No. 1 Com.	No. 2 Com.	
4/4	33 - 35	23 - 25	17 - 19
5/4 to 8/4	36 - 38	25 - 27	17 - 19
10/4 to 16/4	40 - 42	30 - 32	22 - 24
RED BIRCH			
4/4	44 - 46	30 - 32	18 - 20
5/4 to 8/4	46 - 48	32 - 34	20 - 22

SAP BIRCH			
4/4	38 - 40	26 - 28	20 - 22
5/4 and up	40 - 42	28 - 30	20 - 22
SOFT ELM			
4/4	38 - 40	27 - 29	18 - 20
5, 6 & 8/4	40 - 42	29 - 31	20 - 22
BASSWOOD			
4/4	36 - 38	27 - 29	19 - 21
Thicker	38 - 40	29 - 31	21 - 23
PLAIN OAK			
4/4	54 - 56	35 - 37	23 - 25
5/4 to 8/4	56 - 58	37 - 39	25 - 27
ASH, WHITE AND BROWN			
4/4	48 - 50	30 - 32	21 - 23
5/4 to 8/4	55 - 57	32 - 34	22 - 24
10/4 and up	64 - 66	44 - 46	24 - 26
BOSTON, MASS.			
White pine uppers, 1 to 2 in.	92 00	98 00	
Selects, 1 to 2 inch	80 00	88 00	
Fine common, 1 in.	68 00	70 00	
Fine common, 1 1/4 to 2 in.	70 00	72 00	
No. 1 Cuts 1 in.	55 00	55 00	
No. 1 Cuts 1 1/4 to 2 in.	60 00	64 00	
No. 2 Cuts, 1 in.	40 00	40 00	

No. 2 Cuts, 1 1/4 to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	37 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 50	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	29 00	29 00
Canadian spruce boards	25 00	25 00
Spruce, 10 in. dimension	25 50	27 00
Spruce, 12 in. dimension	26 50	28 00
Spruce, 9 in.	24 50	25 00
Spruce, 8 in. and under dimen.	23 50	24 00
10 and 12 in. random lengths,	25 00	26 00
10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 6, 2 x 7	21 00	21 50
and 3 x 4 random lengths, 10	21 00	21 50
feet and up	21 00	21 50
All other random lengths, 7-in.	21 00	22 50
and under, 10 ft. and up	21 00	22 50
5-inch and up, merchantable	22 00	22 00
boards, 8 ft. and up, p 1s	22 00	22 00
1 x 2 and 1 x 3 furring, p 1s	22 50	22 50
clipped and bundled	22 50	22 50

1 1/2-in. spruce laths	4 15	4 25
1 1/2-in. spruce lath	3 75	3 80
New Brunswick Cedar Shingles		
Extras	3 50	
Clears	3 00	
Second clears	2 75	
Clear whites	2 00	
Extra 1s (Clear whites out)	1 50	
Extra 1s (Clear whites in)	1 00	
Red Cedar Extras, 16-in. 5 butts	3 40	3 55
to 2-in.	4 25	
Red Cedar Eureka, 12-inch	4 25	
5 butts to 2-in.	4 25	
Red Cedar Perfection, 5 butts	4 30	
to 2 1/4	3 40	3 50
Washington 16-in. 5 butts to 2-	3 40	3 50
in. extra red clear	3 40	3 50

The Pearl City Veneer Company, Jamestown, N.Y., report prices of veneers as follows: 1/80-in. maple, \$3.75 per M. feet; 1/24-in. maple, \$4.00 per M. feet; 1/20-in. maple, \$4.25 per M. feet; 3/16-in. 3-ply maple, sanded one side, 3 1/2c. per ft.; 1/4-in. 3-ply maple, sanded one side 4c per ft. All F.O.B. Jamestown, New York.

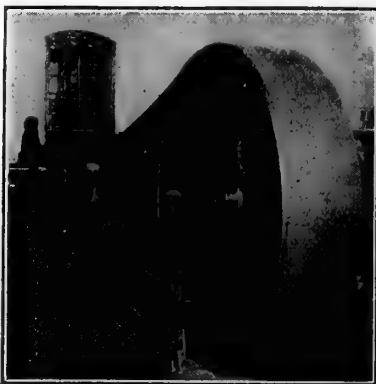
"I Don't Care"

Many belt operatives express this sentiment when we show them their belts are improperly handled, unscientifically managed, and a cause of large money loss which is preventable.

We advocate Cling-Surface treatment and slack running belts and guarantee best results obtainable. Still, after explaining the benefits derivable from slack belts from A to Z, making valuable suggestions, and offering to take no money whatever for Cling-Surface if it doesn't do all we say, many men give little thought and often say, "I don't care. My belts give me a lot of trouble, that's true, but I haven't time to think of them."

The man who Does care uses Cling Surface and it pays him well.

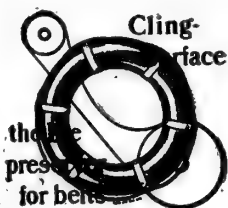
Every managing engineer who is keen as he should be in showing profits from his plant must give all the belting and transmission ropes systematic attention. And Cling-Surface treatment is the one



logical method of constantly maintaining high transmission efficiency and prolonging the life of the whole transmission system.

Where the initial tension is eased by Cling-Surface treatment, shafts, pulleys, hangers, bearings and their mountings are relieved of unnecessary strain, and there is a reduction in internal friction, of repair expense, lubricants and attention that make large annual savings—all due to the action of Cling-Surface.

Put Cling-Surface on just one tight belt for a trial. Select one that has been slipping badly, running off or wearing rapidly, and you will find Cling-Surface highly beneficial. Ask us for examples from plants where Cling-Surface has demonstrated itself to be indispensable. Let us quote f.o.b. Toronto.



Cling-Surface Co

1021 Niagara St Buffalo N Y
New York Boston Chicago Denver
Atlanta Memphis Toronto Etc 38

Support Home Industries

The Canada Metal Co., Ltd.,
Manufacture in Canada—



Harris Heavy Pressure

"The babbitt metal without a fault"

The prime favorite with all engineers

The best babbitt for all general machinery bearings

Manufactured and Guaranteed by

Canada Metal Co., Limited

Head Office and Factory, Toronto, Ont.

Branch Factories: Montreal, Winnipeg

Order a Box From Our Nearest Factory

What a Test Proved



Above Cut shows a piece of 9-32 inch Chain proof tested to 3,000 lbs.



Showing the same pulled to destruction, breaking at 7,800 lbs.
(See how this Chain stretched before breaking.)

"Ajax" Loading Chain is made from special steel of highest tensile strength and toughest wearing qualities. Every link of "Ajax" Chain inspected before shipment, and every weld guaranteed perfect.

GET OUR PRICES AND PARTICULARS

Standard Chain Company

Pittsburgh, Pa.

The World's Largest Chain Producers.

Montreal: Alexander Gibb, St. Nicholas Bldg.

Winnipeg: Bissett & Loucks.

Vancouver: John Burns, 329 Railway St.

IT IS CHEAPER AND QUITE AS ARTISTIC

Why use expensive Hardwoods when you can get

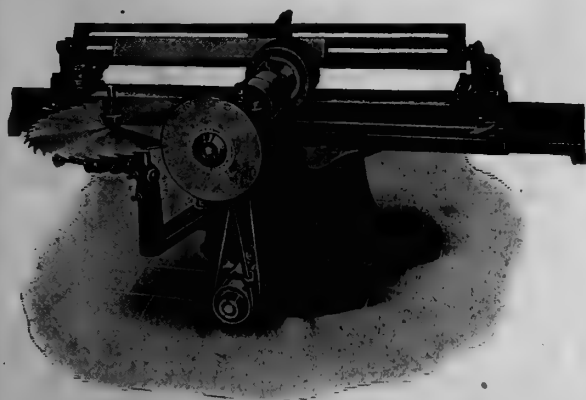
B.C. FIR FOR INTERIOR TRIM AT LESS MONEY

Casings, Base, Finish, Flooring, V-Joint Ceiling and Mouldings.

E. H. HEAPS & CO., LIMITED

VANCOUVER, B.C.

Mills at Ruskin and Vancouver, B. C. | HEAD OFFICE: 445 Hastings St. West, Vancouver, B. C.



This Type "E" Knife Grinder and Saw Gummer

is the smallest size we make. A practical up-to-date Bench Grinder at \$65.00.

We make other grinders for sharpening knives up to 130-in. length.

Write for catalog showing the complete Rogers-Buffalo line.

SAMUEL C. ROGERS & CO.,

81 Lock Street

:::

BUFFALO, N. Y.

DIXON'S Solid Belt Dressing



These handy sticks, containing all the elements needed to keep a belt soft and pliable and adhesive can be rubbed on the belt while running. Their use keeps the belt in a condition of maximum service and longest life—cuts down the belting bill and prevents delays and shut-downs. Send for Booklet No. 238, "The Proper Care of Belts."

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

Established 1827



Patented Nov. 29-1892
July 19-1910

PERFECT GROOVES

Any width, with or across grain. Rapid, no screw adjustment. Guaranteed to give satisfaction on all classes of work.

Huther Bros. Dado Head can be used on any circular saw mandrel and is adjusted in the time it takes to remove a saw. Sent on approval. Write for complete description and catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc., 1103 University Ave. ROCHESTER, N. Y.



WHY you should install the Mahony Blower

System in your Planing Mill

Fifty per cent. higher efficiency than any other on the market to-day, uses 1/2 less power, costs less to install, no cyclone required, eliminates back pressure on the fan.

I will undertake to increase the capacity of any system now installed 50 to 100% by the application of the Mahony Back Pressure valve on your fan, without using a scrap more of horse-power.

YOU NEED this apparatus in your plant

Write to-day for prices

A. Mahony, 512 Wellington West, Toronto

? Have You an Invention

If so, we can help you to obtain every dollar of its worth.

We possess the expert drafting and mechanical ability; the essential machine shop and equipment for developing practical models; the necessary knowledge for the proper investigation of patent records, etc., and the procedure on obtaining patents that will give you absolute protection.

We obtain and sell patents in every country. Write us for any information you desire.

The Patent Selling & Manufacturing Agency

James R. Cameron, M. E., Manager

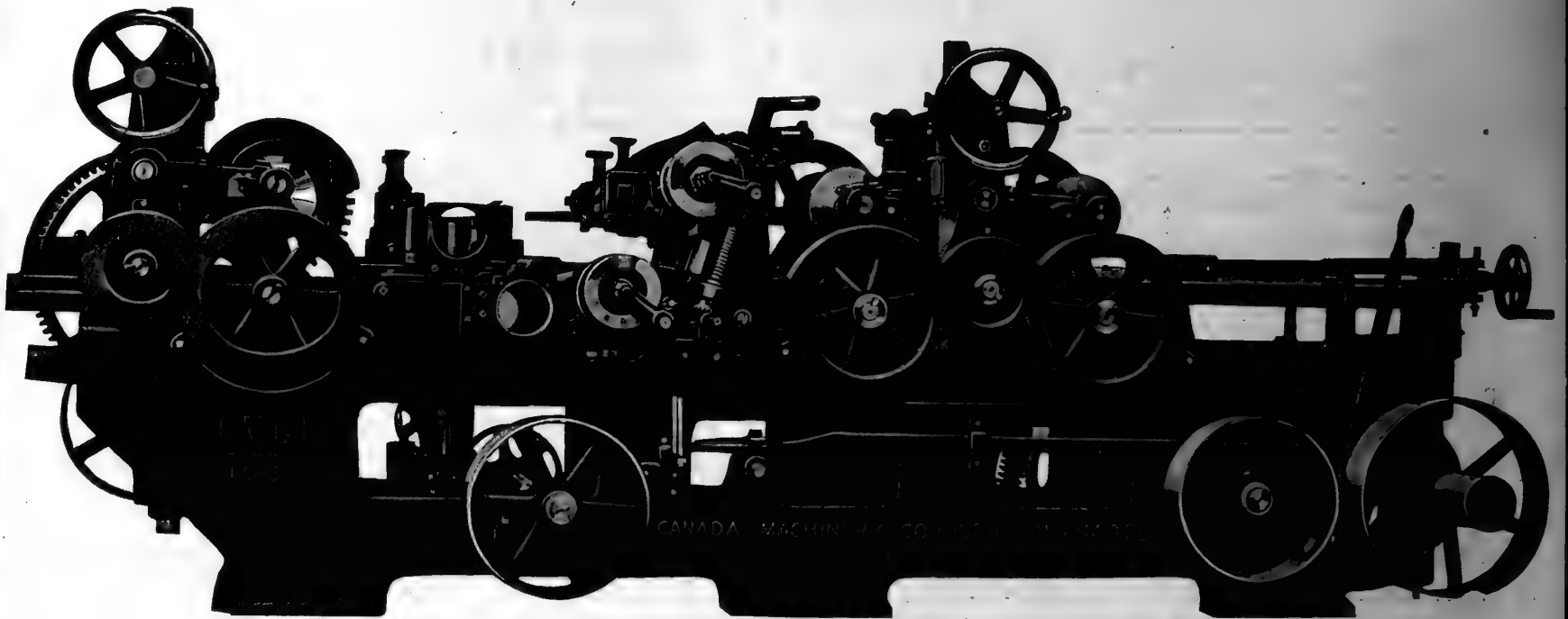
Patent Office, Suite 301-302, 22 College St., Toronto

Factory & Workshops, 206 Simcoe St., Toronto

PLANER &



MATCHER



15" Double Cylinder Planer and Matcher

Our No. 105 machine is a general purpose, medium heavy machine, especially suited for the general planing mill.

The feed range is from 45 to 100 feet per minute. Planes and matches 15" wide by 6" thick.

Full details and description contained in bulletin No. 105, sent on request.

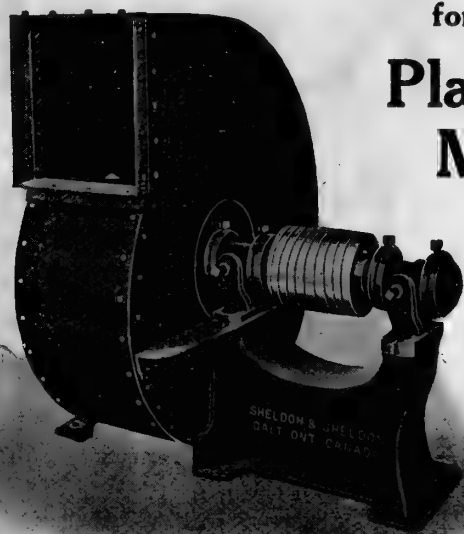
Canada Machinery Corporation, Limited

Galt - Ontario

Largest Builders of Woodworking Machinery in Canada

SHAVING EXHAUST FANS

for the
**Planing
Mill**



The **Sheldon Shaving Exhaust Fan** is specially designed to give the best results in the Planing Mill, having a saving in power and speed of 25% to 40%.

Write for particulars

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

Messrs. Ross & Greig, 412 St. James St. Montreal, Que. Messrs. Walker's Limited, 259 Stanley St. Winnipeg, Man.

Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.

WICKES GANGS

"As Staple in a Saw Mill as Sugar in a Grocery."

FLAT GANGS Unexcelled in the manufacture of

Flooring Strips
Silo Stock

Cedar Siding
Door Stock
Boards

Shiplap
Box Lumber

from cants and flitches, from either hard or soft woods.

ROUND LOG GANGS

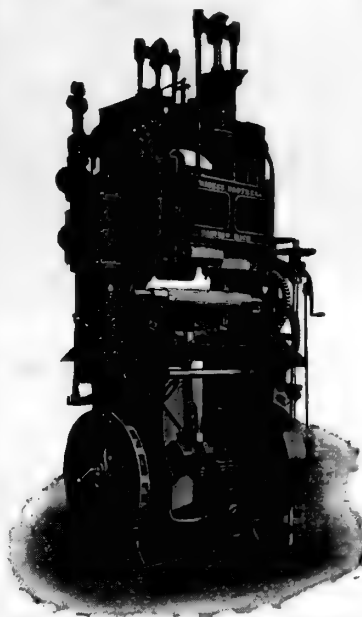
JUST WHAT THE NAME IMPLIES—taking all your small logs just as they come from the pond and cutting them up into boards or dimensions, getting every board there is in the log, never over-slabbing (wish we could say this of all head sawyers.) Built to handle either one or two logs at once, up to 14 in. diameter.

KEEP THE SMALL LOGS AWAY FROM THE HEAD SAW and CARRIAGE entirely, raise your cutting capacity, and install economy by the same stroke.

Not an EXPERIMENT, but an ECONOMIC NECESSITY.

Think it Over Carefully, then Write us for Details.

"The Gang cannot
Overslab."



Wickes Brothers

410 White Building - SEATTLE, WASH.

Head Office, Saginaw, Michigan, U. S. A.

Morgan Machine Company

ROCHESTER, N. Y.

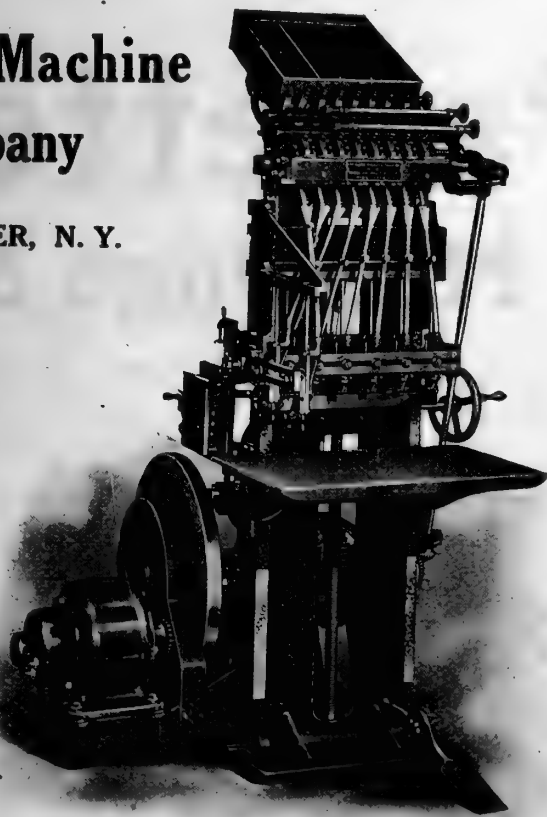
Manufacturers
of—

Nailing
Machines,

Lock Cor-
ner Box
Machinery,

Box Board
Matchers,

Box Board
Printing
Machines.

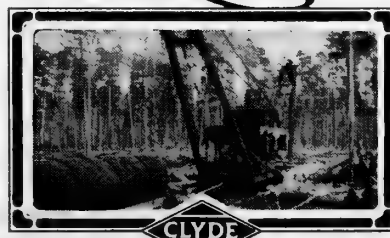


Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



HORSELESS SKIDDING



Skidding with mechanical rehauls to return lines to the woods is becoming more and more popular. Greater speed and independence from weather conditions constitute the principal reasons for this.

YOU WILL BE INTERESTED IN HEARING & SEEING WHAT OTHERS ARE DOING WITH CLYDE MECHANICAL REHAUL SKIDDERS. Write us and we will arrange to Show you

CLYDE IRON WORKS
DULUTH, U. S. A.





Knight

Pony Lath Mill

This mill is built for use with a 10 to 15 horse power engine and as single mill only. It is specially suited to the requirements of thresher and saw mill men operating in small tracts of timber, as both husk and carriage are of a size which will permit of easy loading between the standards of a wagon when moving from one setting to another.

Write for the catalogue of the Knight line of saw mill machinery.

Size "S" Single Mill with 16-foot Carriage

Size Husk 3 feet by 6 feet 3 inches
Diameter and Length Mandrel . 2 3/16 by 55 inches
Size Drive Pulley 20 by 10 inches
Feed per Revolution of Saw 0 to 3 1/4 inches
Feed Belt 4-inch Gandy
Largest Diameter Saw 56 inches
Length of Carriages 12, 16, 20 or 24 feet

Width of Carriages 33 inches
Trucks 7-inch wheels and 1 1/4-inch axles
Length Track 32, 40, 48 or 56 feet
Style and Opening of Blocks C1-36 inches
Style Mill Dogs Pony Excelsior
Style Set Works No. 1 Single Ratchet

With each complete size "S" mill we furnish one saw, wrench, cant hook, feed belt, pulley with boxes for tightener and foundation bolts for husk.

THE KNIGHT MFG. CO., Canton, Ohio.

Canadian Distributors:—R. Hamilton & Co., Vancouver, B. C. E. Long Mfg. Co., Orillia, Ont.

650 Sets Payette's

Famous Patent Mill-Dogs Sold

Why?

- Because (1) They will dog with perfect ease and safety in any class of timber.
(2) Will dog just as easily, frozen maple or hardwoods of any description.
(3) Will dog the last board, just as easily as they dogged the first one.
(4) They do not tear the board or stock.
(5) Many other reasons, too numerous to mention here.

Write us for full particulars and booklet on same.

We also manufacture the following High-Grade Saw-Mill Machinery;—New Modern Saw-Mill Carriages, with either three or two head blocks; P. Payette's New Patent Saw-Mill Dog, for use in either winter or summer; P. Payette's Grip-Set Works; Steam Feed Valves, Steam Lifter and Loaders, Valves. Five different class and style of Edgers, for either light or heavy duty. Combined Gang-Circulars and Edgers, or Independent Gang Circulars.

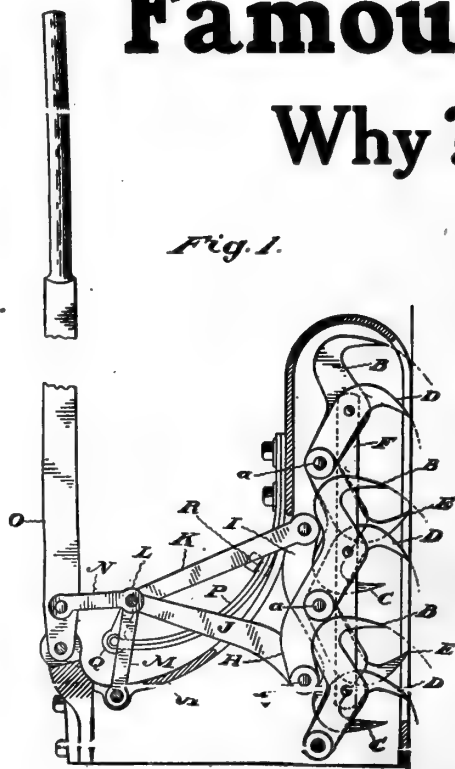
Steam-Canters, Steam Lifters and Loaders, and a general line of saw-mill machinery. Detachable Chain-Sprockets, Castings of Gray-Iron, Semi-Cast Steel, and brass castings for general use.

Descriptive Booklet and prices mailed free upon request.

P. Payette & Company

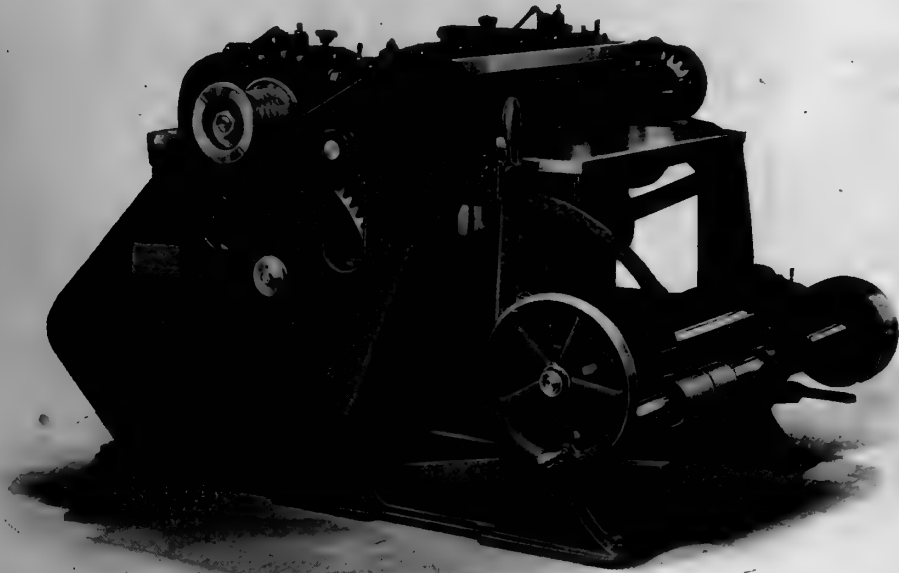
Engineers and Machinists

Penetanguishene, Ontario



Berlin Surfacers

We have specialized in planing machines for years. Berlin surfacers represent the experience of all these years. You can make no mistake by putting your surfacing requirements up to us. We build surfacers for every purpose. Whatever surfacing you want to do may be done at lowest cost on Berlin.



Are Your Cabinet Surfacers Losing Money For You at the Sander?

Don't depend on your sander to correct the inferior work of your surfacers. That isn't profitable. The inefficiency of one machine is handicapping the other.

Are you thinking of replacing or adding to your present surfacing equipment? Then judge the earning-power of Berlin Surfacers by comparing them with others. Mail your card request for complete data now — so you'll have it for reference when you want it. : : :

Surface your stock on the Berlin "156" Single Cabinet Surfacers. Then once through at the sander will suffice. And instead of sanding two pieces at one time the uniformity of the surfacing will enable your sander operator to feed stock across the entire width of the machine. Its efficiency is increased 100 per cent. That assures profit, absolutely.

Equipped with round heads carrying thin steel knives, which may be ground and jointed on the machine, the "156" produces a finish that shines. Sanding all your stock won't be necessary.

The sturdy construction and the use of only proven design features assures low upkeep cost. There'll be fewer necessary shut downs, less lost time. The top in-feed roll and chip-breaker may be sectional. The wedge method of bed adjustment assures its stability. Fine finish is therefore assured always.

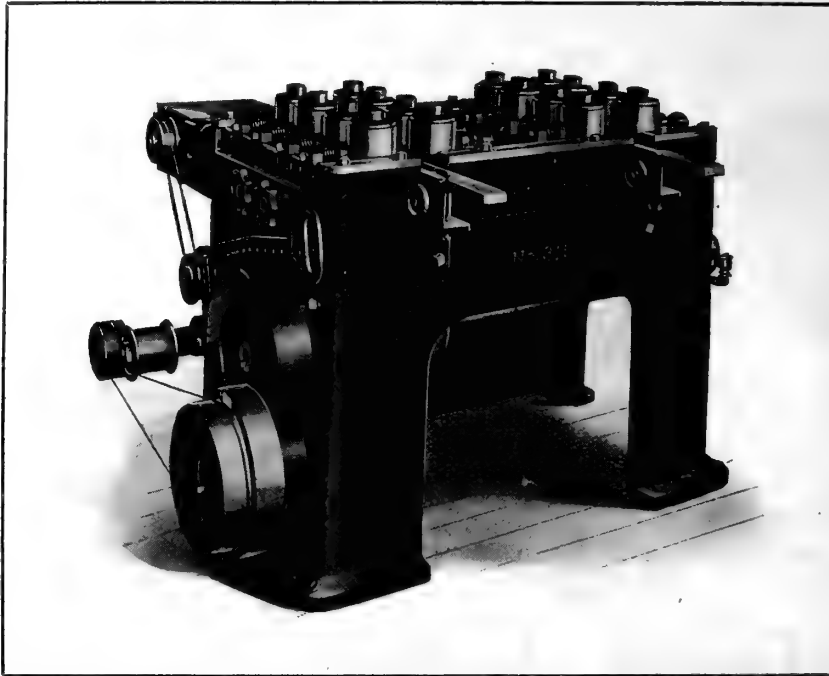
BERLIN MACHINE WORKS, LIMITED, Hamilton, Ont.

Largest Manufacturers of Woodworking Machinery in the World

UNITED STATES PLANT

BELOIT, WISCONSIN

Improved Box Board Matcher



16 driven feed rolls, $4\frac{1}{8}$ in. in diameter, each one of which can be adjusted independent of all others.

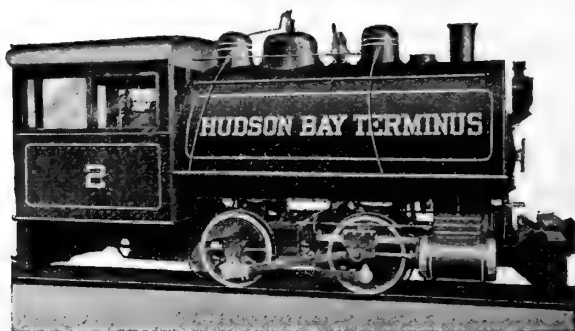
$4\frac{1}{2}$ in between centres of first and second pair; $5\frac{1}{2}$ in. between centres of second and third pair (the cutters work between this pair) and $4\frac{1}{4}$ in. between centres of third and fourth pair.

This Matcher is compactly and rigidly constructed with every part readily accessible and the operators are close together when working.

Catalogue gladly furnished which illustrates and describes many other machines built expressly for Box Factories.

Mereen-Johnson Machine Company, **MINNEAPOLIS, MINN.**
U. S. A.

LOW MAINTENANCE COST LOCOMOTIVES



usefulness of this class of equipment. They are qualified to co-operate with you in selecting the locomotive best suited for your work. Let them help you.

The life of a locomotive depends upon the care taken in manufacturing. Care in manufacturing increases profits by decreasing cost of maintenance and repairs.

From their long experience in locomotive building, our engineers have learned what is necessary to increase the life and

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, MONTREAL, CANADA

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton
Climax
Locomotive
Designed
Especially for
Heavy
Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

HEISLER GEARED LOCOMOTIVES

Especially adapted for heavy hauling on steep grades, sharp curves and uneven tracks. For logging, switching and pulling on main lines, mills, furnaces and industrial purposes.

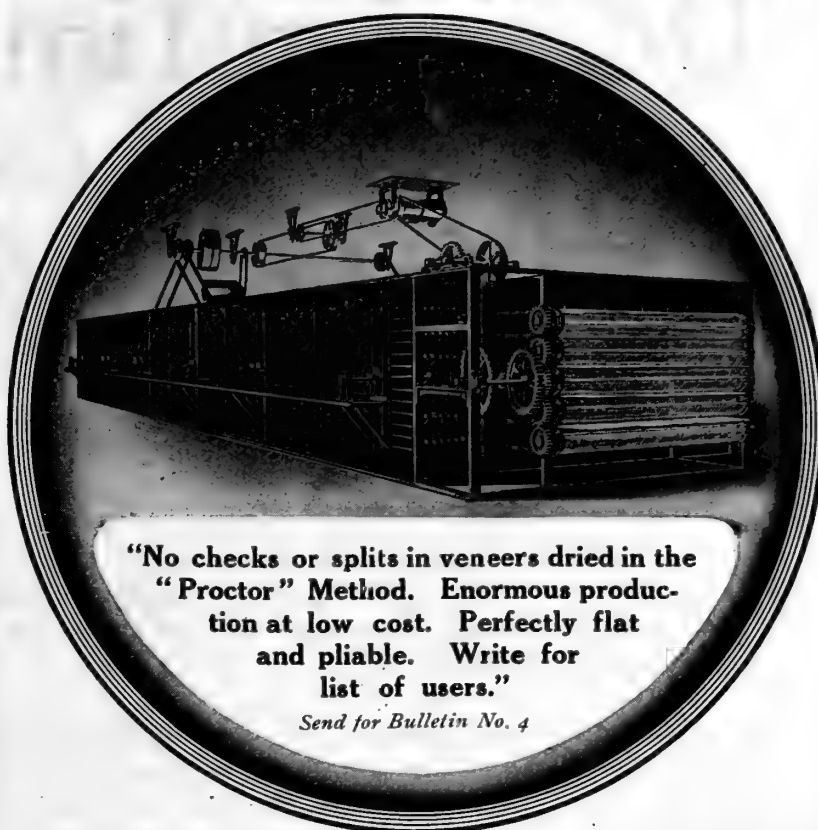
Engine being operated by the Trout Creek Logging Co., Ltd. of Trout Creek, Canada

Just Off the Press—New Detailed Descriptive Catalog 108 G.C.

Heisler Locomotive Works

ERIE, PA., U. S. A.

Whitney Engineering Co., Tacoma, Wash., North Western Sales Agent

"PROCTOR" VENEER DRYER

"No checks or splits in veneers dried in the
"Proctor" Method. Enormous production at low cost. Perfectly flat and pliable. Write for list of users."

Send for Bulletin No. 4

THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA, PA.

**Logging Locomotives**

The knowledge and experience of fifty years in locomotive designing and construction is what you get in our Logging locomotives. They are specially constructed for logging operations and will stand up to the severe service in which they are expected to run.

They are as carefully designed and built as our 200 ton locomotives. Repair parts may always be obtained on the shortest notice.

May we send you specifications

Canadian Locomotive Company, Limited, Kingston, Ont.
Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, $1\frac{1}{2}$ cents each.

Railway ties, nine feet long, $1\frac{3}{4}$ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

Guiding The Mill Man To Larger Profits

Our work consists in helping mill men to increase the quality and volume of material turned out, by furnishing them with **tools which do more and better work with the same labor and power costs.**

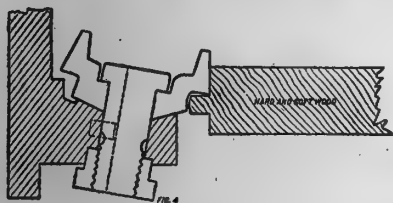
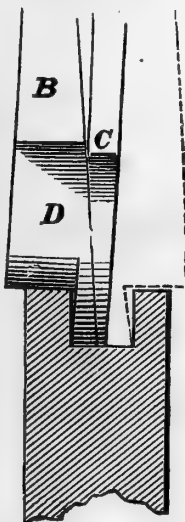
The Shimer Cutter Heads of today are the logical product of years of experience and unexcelled facilities for manufacturing them. They offer exceptional advantages for the economical manufacture of Flooring, Ceiling, Siding, Wainscoting, Ship Lap, Door and Sash Patterns, etc. They are designed in sizes, styles and plans to meet any planing mill problem that Cutter Heads can solve.

The Shimer Cutter Heads cut fast and clean because the Bits work with a **divided shearing cut** and have plenty of point and edge clearance. (See diagram.) The Bits are set on the Head in such a manner that only their cutting edges come into contact with the lumber, **preventing friction in the cut** and the consequent heating of the Bits and burning of the lumber.

Each Bit is seated to line up perfectly, presenting self-clearing bit points to make easy the matching of any and every variety of knotty, and cross-grained single tongue and groove flooring. The cutters retain their natural cutting position on the Head and work as well

after years of service as when new.

Consider these points of merit and let us have your order today for such tools as you can use.



Popular Cutter Heads

The most popular of The Shimer Cutter Heads for feeds from 60 to 150 lineal feet a minute are Figs. 202 and 203. The Bits are held within conical duplex bit seats, self-centering, arranged with the very complete Expansion feature for the fine adjustment of tongue and groove thicknesses.

Price with 4 bits to each head, the set \$40.95

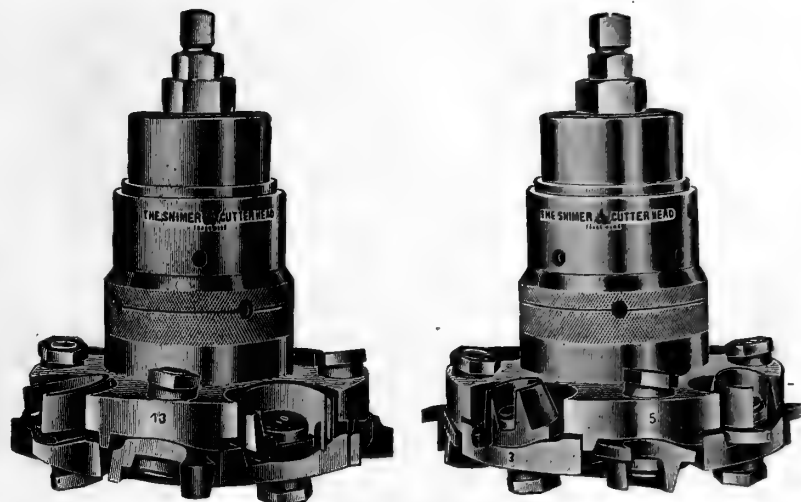
Price with 6 bits to each head, the set 49.27

Price with 8 bits to each head, the set 57.60

Complete with Flooring Bits. The Heads will also receive Bits for thin Ceiling— $\frac{3}{8}$ at \$1.05 each and Bits for 2-in. thick plank at \$1.33 each.

Door, Sash and Coping Tools

That save all the hand fitting. No changing of patterns, therefore, no trouble in framing the door and sash parts when they are matched up with the Shimer Cutter Head. We relieve you of that detail of the business when we place the mould in counterpart within the contour of the Bits. The Bits are filed only to sharpen and being set by means of a gauge give accurate and uniform results. Prices very reasonable.



The "Shimer Limited" Cutter Heads, with Expansor, Fig. 627 and Fig. 628

For the High Speed Matcher

These Heads have a chucking device which self-centers them on the spindle and grips firmly thereto when the device is drawn up, overcoming the objectionable set screw as a means of fastening the Head to the spindle. It is reliable and practically perfect in results.

The Bits carry a larger areal surface and the Bit chambers are of greater depth to compensate for the new chisel point given to the Bits for greater relief to the parts coming into contact with the lumber.

They are simple and strong throughout, have no delicate parts to break down or get out of order, and are safe and efficient tools for matching flooring, etc., at high speeds.

Price, net, for Flooring, \$72.46 the set complete.

Jointer Heads

For jointing plain edges we make several styles of Jointer Heads provided with shearing effect to produce the easiest and at the same time the smoothest work. Made of Steel Forgings they supply the strongest and best. Our very reasonable prices put the tools within the reach of all.

Price, with 4 bits to each head, the set, $1\frac{1}{4}$ -in. \$31.20

Price, with 4 bits to each head, the set, 2-in. 33.28

Ship Lap Heads

to give you the best service must be of a kind that is always ready and to interchange with matcher and other Heads you may have fitted to your machine, thus avoiding a change of machine guides. This is one reason why the Shimer Ship Lap Heads are so generally used. The other reason is that they do work so satisfactorily that all who know their convenience take them in preference to others.

Price, with 4 bits to each head, the set, $1\frac{1}{2}$ -in. thick . . . \$34.84

Price, with 4 bits to each head, the set, $2\frac{1}{2}$ -in. thick . . . 35.88

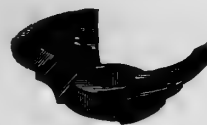
Thin Steel Knives

Advanced ideas referring to the planing and surfacing of lumber have developed into the use of the thin blades, made from high speed steel, which when properly tempered and treated, serve for one or two days of work on hard maple, oak or hickory.

These blades are known as our Bedee Knives and are recommended by users as the best that can be procured. For the benefit of those desiring to use this style of a knife we have facilities to furnish them in any length or thickness.

Write us about your requirements.

Don't Burn Your Moulding



Blackened edges so often found in hardwood Mouldings indicate the use of inferior tools, which friction and burn because of their failure to have proper clearance.

Shimer Reversible and Non-Reversible Cutters are made of the finest tool steel by experienced workmen. In design and construction they are superior to anything on the market. They cut well and retain their shape until worn out. Send us drawings or wood samples for estimates on special cutters. Many useful designs, with prices, are given in our catalogue.

Address **SAMUEL J. SHIMER & SONS, Galt, Ont., Can.**

The Mark*of Quality*

Profits Depend on Production

The simplest and cheapest way to boost production is to

Install a Steam Feed

Consult our Engineering Department before you decide that you are **short of steam**, because we **guarantee** results.

Our **Model "D" Valves** are a revelation to both Sawyer and Fireman. Let us tell you why. Catalogue on application.

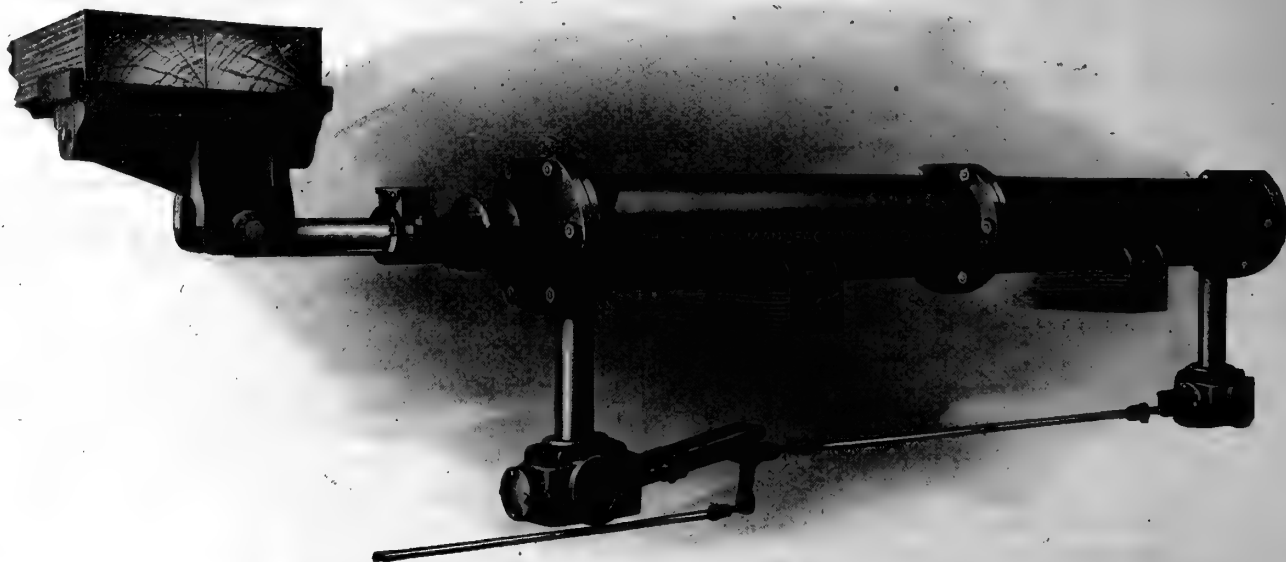
The E. Long Manufacturing Co., Limited, Orillia, Canada

Robt. Hamilton & Co., Vancouver

Gorman, Clancey & Grindley, Limited, Calgary and Edmonton

Represented by:

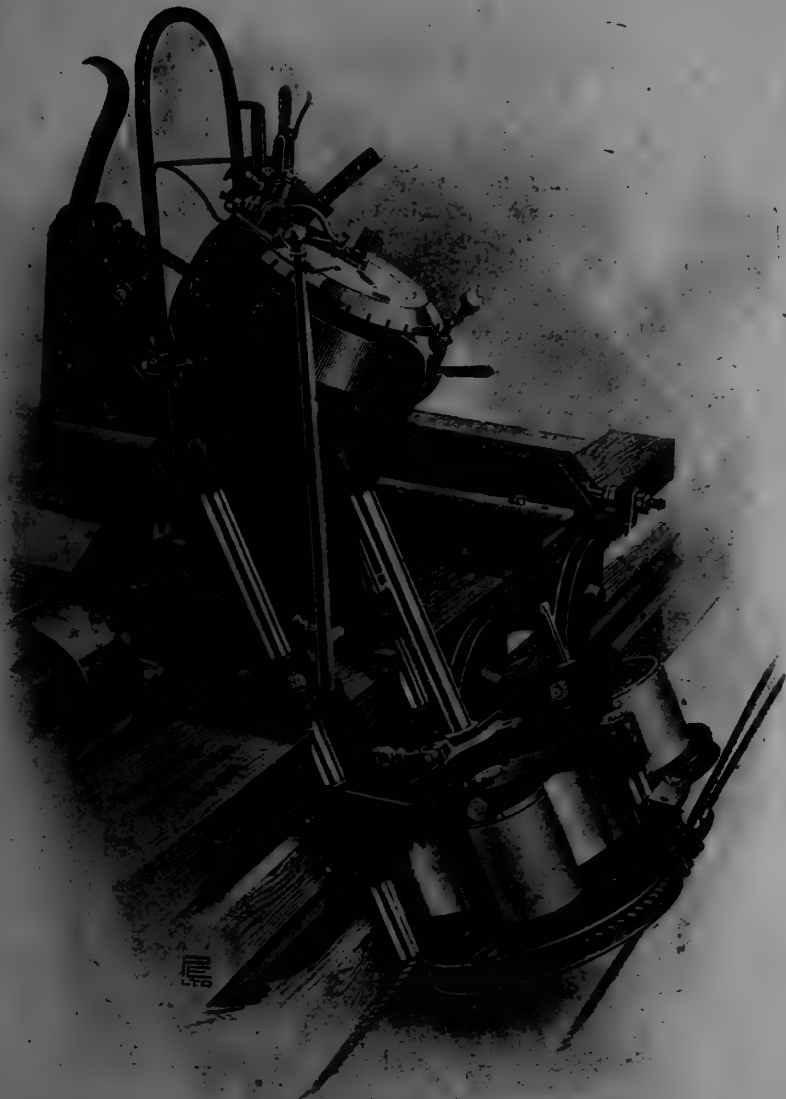
Stuart Machinery Co., Ltd., Winnipeg
Williams & Wilson Ltd., Montreal



See additional Ad on page 67

No Work - No Heat No Lost Motion

What It Means to Your Setter



WITH nothing to tire or distract him the setter can give his undivided attention to the sawyer's signals. He can cut as much at the end of his shift as at the beginning.

TROUT ROPE DRIVEN POWER SETWORKS

Combines a setting and receding mechanism. It operates whether the carriage is stationary or in motion. Two levers only control all operations. No bending or stooping is necessary, the setter standing erect at his work. One shift of the levers will change the set from $1/32$ " to 6" full. The size of logs does not affect the speed or accuracy of the set. The operation is without rack or jar, *lost motion cannot possibly develop.*

The Trout Power Setworks is absolutely self contained, can be attached to any make of carriage and is built for rack or screw knee.

DESCRIPTIVE BULLETIN NO. 107

Waterous Engine Works Co., Ltd.

Brantford, Canada

Vancouver, B. C.—H. B. Gilmour.

Winnipeg, Man.



"FROST KING" METAL

Our thirty five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock this, write us and we will take pleasure in making you a shipment of a 25 lb. box.

\$5,000,000.00

worth of mixed metal
sold annually.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:—

New York, N. Y.

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BATTS LIMITED

WEST TORONTO

MANUFACTURERS OF

Staved Columns
Veneered Doors
Newel Posts
Sashes - Flooring
Trim
Pine Doors and
Frames
Turned Newel Posts and
Balusters
Cypress Greenhouse
Material

BATTS LIMITED

MANUFACTURERS

WEST TORONTO, ONT.

THE
LEATHER
BELT
THAT'S
KNOWN
OUR
"EXTRA"



MONTREAL
WINNIPEG

TORONTO
VANCOUVER

The J. C. McLaren Belting Co.

Limited

General Mill Supplies

MONTREAL

Slow Speed — Low Power Exhaust Systems

For removing Shavings, Sawdust, Emery Dust, Lint, Smoke and Odors

Is your Blower System satisfactory? — If not, we can make it so
What We Have Done For Others, We Can Do For You



Our System recently Installed in Largest Box Shook Factory in Ontario.

TORONTO BLOWER CO., Toronto, Ont.

